

WEEK
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BUSINESS WEEK



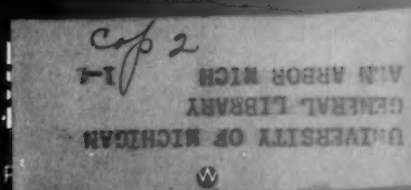
START
OF WAR
1939



Recruiting center for war jobs— focal point of stringent new manpower controls—the U. S. Employment Service office.

BUSINESS
WEEK
DEX

PUBLISHED BY THE MCGRAW HILL PUBLISHING COMPANY



... and we made a Sapphire!

YOU'RE LOOKING at a sapphire being made in the incandescent heat of a specially designed furnace... a synthetic sapphire... better than the natural gem. It takes hours to grow one of these sapphire boules.

What's so wonderful about it? Sapphire is necessary for the security of this country. Out of this jewel stone are made hard, long-wearing bearings for precision instruments. The various precision devices of a modern battleship require more than 4,000 jewels; about 100 more are needed in fire-control mechanisms. Modern pursuit planes and bombers require up to 100 sapphire bearings in their instruments.

In 1940, this country was completely dependent upon Europe for sapphire jewels. The call went out for American-made sapphire to meet this nation's needs.

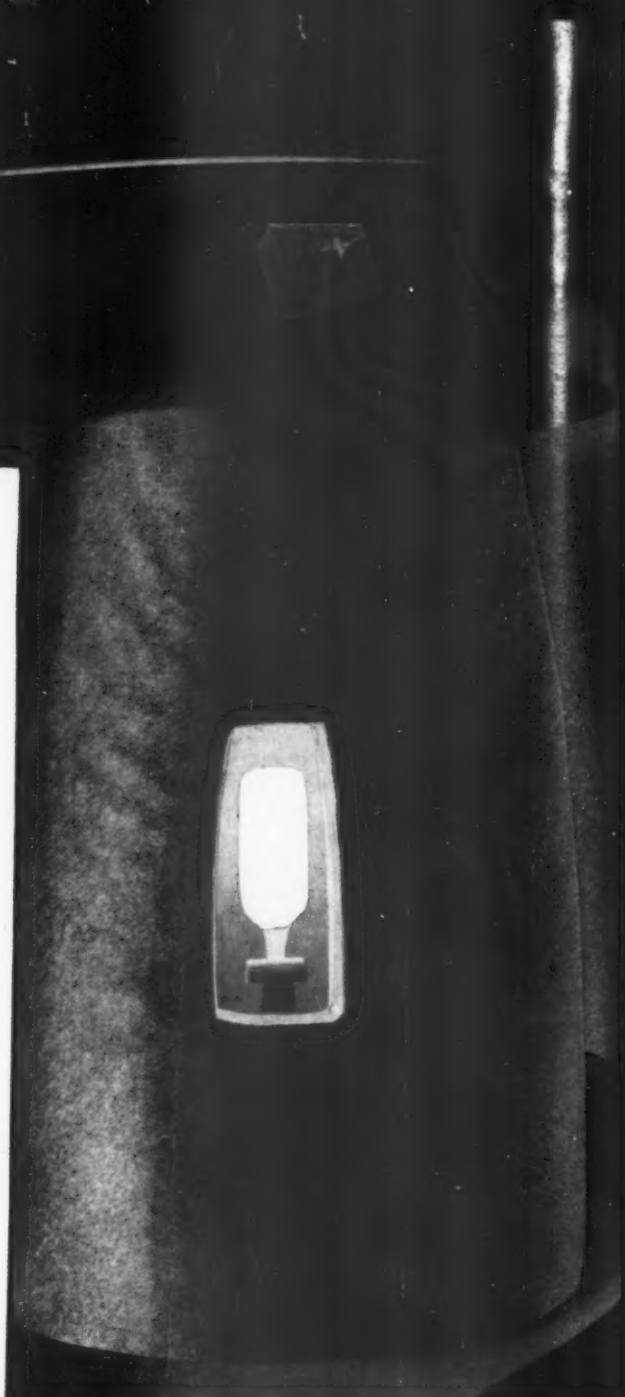
Because we at Linde are experienced in the production of gases and in the accurate control of high temperature gas flames, we volunteered to try to make sapphire. After two years of experimental research, we learned how to produce the high-purity raw materials needed and also how to make sapphire from those materials. Today, we make more synthetic sapphire than this country ever imported from Europe... enough to meet all industrial and military needs. Thus America need never again be dependent upon an outside source.

Right now, we make colorless sapphire because colorless jewels make harder bearings. No sapphire is available for anything but war production. In the future we stand ready to make ruby and other gem stone materials for the jewelry trade... and for you.

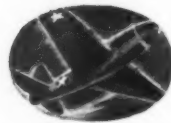
This research development by The Linde Air Products Company is paralleled by other recent achievements of Electro Metallurgical Company, Carbide and Carbon Chemicals Corporation, and National Carbon Company, Inc.—all of which are Units of Union Carbide and Carbon Corporation.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation

GENERAL OFFICES: NEW YORK, N. Y.
Offices in Principal Cities



HIS BEARINGS ARE RIGHT—Chronometers, compasses, and other navigational aids must be rugged as well as precise. Sapphire bearings can "take it."



FLYING JEWELS—Pilots' lives and the success of their missions depend upon accurate instruments. Sapphire bearings assure continued accuracy.

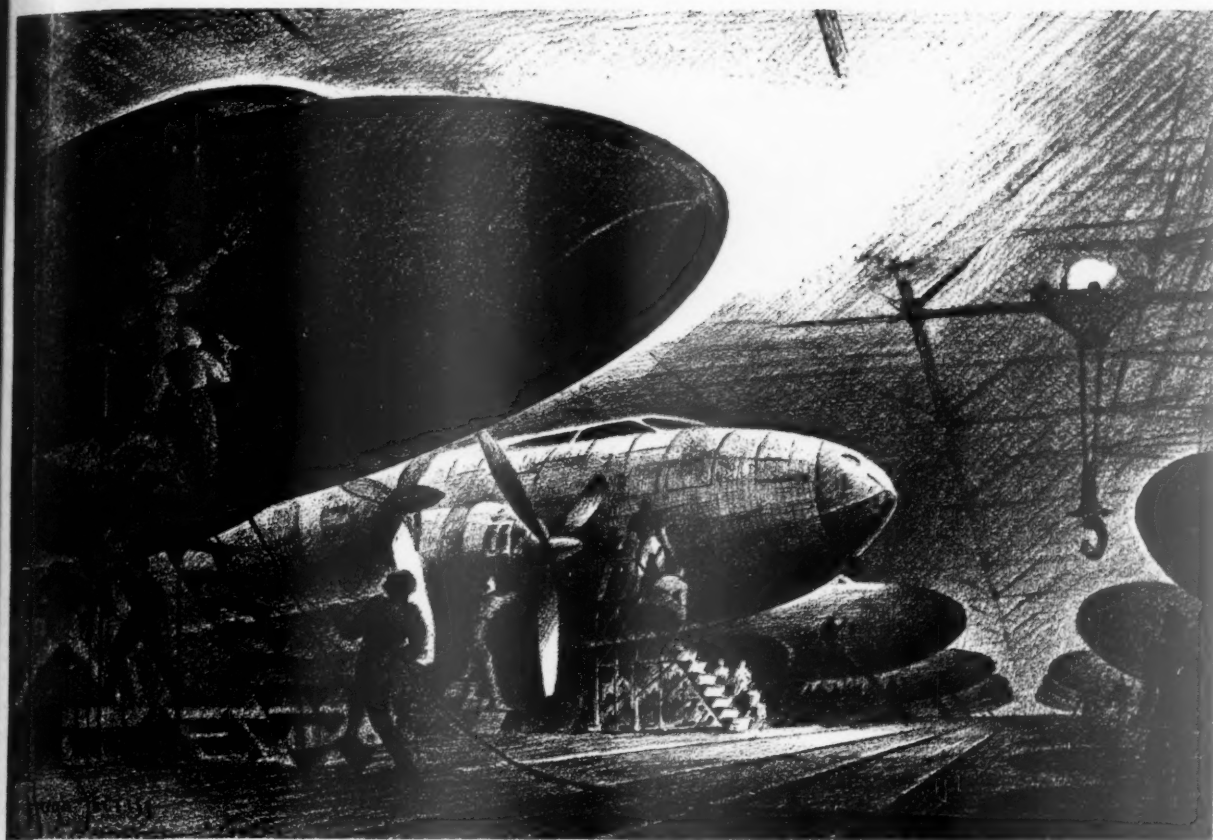


LABORATORY WARRIORS—Delicate balances, time instruments, and other important precision equipment of the research worker need sapphire jewels, too.



YOURS IN THE FUTURE—Flawless gems... such as rubies, sapphires, and spinel... made by this same Linde process... will be available for jewelry in the future.

BUY UNITED STATES WAR BONDS AND STAMPS



America's air power takes the war to the enemy. America's genius for mass production turns the tide of battle.

PRODUCTION LINES ARE BATTLE LINES

ASSEMBLY LINES move faster and faster, as America fights her way toward victory. 100,000 planes in 1943—double 1942's record output! Your dollars turn the wheels of war production. More dollars are needed, needed now.

Buy *more* War Bonds, Tax Savings Notes and other United States Government securities. Be ready for the next Victory Fund Drive in April. Fight as hard with your *dollars* as American boys are fighting with their *lives*.



BANKERS TRUST COMPANY • NEW YORK

Business Week • February 13, 1943



Warden without a whistle

• Unlike the air raid warden, he doesn't wear an arm band or blow a whistle. But he, too, is doing a real war job!

He is your insurance agent or broker — his particular job is to protect you against loss from hazards of many kinds. For instance, if you have production responsibilities, he can help you minimize the chance of power-plant accidents of the sort that inspection by insurance engineers can prevent... accidents which could halt or seriously curtail plant output.

For many years Hartford Steam Boiler has been working closely with agents and brokers throughout the

country. Today this teamwork means more than ever before because it is helping to keep boilers, turbines, generators working for victory.

To help your insurance agent or broker do a better wartime job for you now, Hartford Steam Boiler unstintingly offers all the experience and technical knowledge gained through more than 76 years of specializing in engineering insurance.

And in the peace to come, Hartford Steam Boiler believes that this system will play a vital part in building and protecting a greater and better America.



Covers: Boilers • Pressure Vessels • Steam, Gas and Diesel Engines • Electrical Equipment

THE HARTFORD STEAM BOILER INSPECTION AND INSURANCE COMPANY • Hartford, Connecticut

BUSINESS WEEK

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WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

Inflation Fight Goes On

The Administration intends to hold the line a little while longer—if only for a few weeks—on wages and farm prices. That's about what this week's well-publicized anti-inflation developments—the speech by Economic Stabilizer Byrnes and the 48-hour work-week order—really amount to.

Not What It Seems to Be

The work-week order, calling for a 48-hour minimum with time-and-a-half for everything over 40 hours, isn't the startling innovation that Byrnes made it out to be. It won't lengthen the hours of work for any important number of people. For one thing, it will apply only in designated labor shortage areas—just 32 of them to begin with—and in these areas a work-week of at least 48 hours is already nearly universal in civilian as well as war industries. The new order will merely enable the War Manpower Commission to deal with the occasional exception; it may have its biggest effect among white collar workers, drive a few more of them into the factories.

Again, even in those areas where the order applies, it does not require anyone to work a 48-hour week. What it does is forbid any firm that is not working its employees 48 hours to hire any additional workers without specific WMC sanction. Over the long haul, of course, this means that a short-hours firm will have to lengthen its working hours gradually as normal turnover reduces its labor force. Until Mar. 31, even an employer who patriotically wants to go to 48 hours is not supposed to take the obvious step of laying off any of his men except as WMC can find jobs for them.

• **Why Restricted**—Drastic effects of the order would have come if it had been applied to the areas where there is no labor shortage. But this couldn't be done, and, anyway, the most drastic effect would merely have been to increase the unemployment rolls. No one has yet licked the problem of moving large numbers of workers into a shortage area where housing and municipal services generally are already hopelessly overcrowded.

Staving Off Disaster

Byrnes made his speech because price and wage controls were in imminent danger of sudden collapse: (1) All the labor organizations had gotten up to

break the Little Steel formula limiting wage increases to 15% above Jan. 1941 levels; (2) money for OPA is running out and the request to Congress for more, which Byrnes and Administrator Brown now have to make, would have been the signal for the congressional farm bloc to demand higher prices.

As a result of his speech, Byrnes can gain a few weeks grace at least—and, after all, what he's really engaged in is a fight against time. It's a long fight because it won't end until well after the end of the war.

OPA Funds Vital

A gain of a few weeks now in arresting price and wage increases is especially important. When Byrnes goes to Congress for money he wants to be able to tell the farmers that he stood his ground against labor. Then with the farm bloc temporarily disconcerted by his smart maneuvering on corn prices (BW—Jan. 16 '43, p7), he has some hope of squeezing out enough votes to get OPA's appropriation through without important concessions.

Sooner or later, however, farm prices are going up to parity and beyond. And sooner or later the Little Steel formula will break. That is when OPA will need all the money it can get its hands on; for its policy then will be to hold the price ceilings on cost-of-living items by putting the squeeze on margins and profits. That is the only cushion left. And as the squeeze between costs and prices gets tighter, the ceilings get harder and more expensive to police.

More for Salaried Men

Under the new work-week order, companies that wish to compensate their salaried employees for shifting to a 48-hour basis may do so without clearing with the Treasury or the National War Labor Board for approval of the added compensation as a salary increase. This holds, of course, only in the 32 critical labor areas where the President's order is applicable.

Checkup in the Plants

If the work-week order seems unlikely to succeed in measurably increasing output by forcing workers into the war plants and increasing hours of labor, the War Manpower Commission's other new policy of the week, inherent in its establishment of a Manpower Utilization Service, seems even less likely to succeed.

As announced by WMC Director McNutt at the meeting of the American Management Assn. in Chicago, the new plan will mean that inspectors will be placed in war plants to insure a maximum degree of efficiency in the utilization of manpower. That's bound to be a bone of contention with both management and labor. Management will be inclined to resent interference with plant operation; labor is likely to contend that WMC's men are being used to sanction speedups and stretchouts.

New Oil Crisis Looms

An over-all oil shortage, which might limit military operations within a year, is foreseen by serious-thinking industry and government men. This is not a shortage of transportation or local supply deficiency but the real McCoy—inability of the U. S. to produce enough crude, barring new discoveries.

The threat is generally discounted by a nation that has had to curtail production and that for a generation has been discovering new fields faster than it could consume the oil. But some basic studies recently completed point to the conclusion that during the past few years new discoveries were far below consumption rates and that by early 1944, if not before, the crude supply will be painfully inadequate.

The Petroleum Industry War Council, in a detailed report, claims that an increase in crude prices is the only way to stimulate new discoveries, and that materials and manpower must be provided. In separate studies, the Petroleum Administration has reached the same conclusion. This is more than a backhanded attempt to pierce OPA's price ceilings, since big companies that are heavy buyers of crude agree.

• **A Rebuttal**—OPA anticipated both reports with an announcement that it opposed over-all increases and suggested that government subsidies to drillers might locate new reserves. But the industry contends subsidies won't work.

The Bad News

It was no surprise to war contractors who have been through the renegotiation mill, but firms still trembling outside the door got their first formal statement this week of what the War and Navy Departments consider a reasonable rate of profit. The departments, which have hitherto avoided tying themselves to any specific rate of profit, admitted they go on the assumption that the percentage of profit on war



At Underwriters Laboratories, Inc., in Chicago, this 8-inch concrete masonry wall undergoes standard 4-hour fire test. While heat against the wall rose to 2000° F., temperatures taken at various points on the opposite face of the wall (shown here) did not exceed a rise of 250° F.

An inferno proved the point... **CONCRETE IS FIRESAFE!**

Everyone knows concrete won't burn. But firesafety means more than this. Firesafety is the ability to resist long hours of white-hot heat; to keep flames and burning temperatures from passing from room to room, building to building—an important advantage for war construction.

In the laboratory 8" concrete masonry was subjected to the standard wall fire test. The concrete exposed to temperature of 2000° F., glowed red, then white. And then, to prove this white-hot concrete was not dead or burned-out, a fire-hose stream of cold water was immediately thrown against it and later the wall was loaded to twice its design load without failure.

That's why we say concrete is firesafe.

Today most of the new concrete buildings are being erected for the Army, Navy and war industries—they will make workers, precious tools, and ammunition storage safer from that most destructive hazard—fire.

And when peace comes, concrete will be ready to do a better fire protection job for you in homes, schools, industrial plants and public buildings.

PORTLAND CEMENT ASSOCIATION
Dept. A2b-12, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete...
through scientific research and engineering field work

BUY MORE WAR SAVINGS BONDS

Business Week • February 13, 1943

work should be from a half to a third of the rate on comparable work in peacetime.

New Contract Policy

When Col. Robert Wood Johnson started his new job as head of WPB's Smaller War Plants Corp. Monday, things began to happen. Most important was an announcement from Grand Rapids, which has been hard hit by the decline in civilian furniture business, revealing that \$30,000,000 in war orders soon would be allotted to the city.

Contracts will go to furniture and woodworking firms to employ 6,000 idle workers. Hugo Weissbrodt, in charge of WPB's Smaller War Plants Division for Detroit, this week will confer with Grand Rapids manufacturers, survey equipment, and make sure that little shops get their share.

• **Spreading the Work**—The Grand Rapids rescue is not an isolated move; it signifies a new policy. Under Col. Johnson, SWPC plans to take up distress areas city-by-city and plant-by-plant in an effort to spread new war orders to points where they can be handled without shifting men and machines from overburdened areas.

Depreciation Changes

Contractors are due for an unpleasant surprise if they have been counting on five-year amortization of emergency facilities to cushion them against renegotiation as it does against taxes. The four renegotiating agencies—Army, Navy, Maritime Commission, and Treasury—have just made a cross-agreement that, in effect, substitutes their discretion for the flat allowance of 20% a year.

The new policy, initiated by the Treasury, boils down to this: In renegotiation, the services will allow only reasonable depreciation as an element of cost. Where it is probable that emergency facilities will be useless after the war, they will take this into account in determining profits the contractor may keep. But they will not accept an arbitrary amortization figure, either five years or anything else.

To most companies this policy won't matter a great deal, but a few will find that it makes a big difference in their renegotiation standing.

• **Stirred up by Boast**—What started the thing going was a recent stockholders' report by one of the country's biggest corporations, which was writing off its new plant at the rate of 20% a year. The report told stockholders that when the war ended the plant would be the best and most modern in the world.

The Renegotiation Delay

Government officials are saying profanely that contract renegotiation will never hit its stride until Congress settles the law once and for all. Main thing holding up proceedings now is the fact that everybody knows Congress intends to amend the rules again. Contractors are stalling for time in spite of all efforts to coax them into a final settlement.

Amendments passed last fall were admitted stopgaps; at the time, congressmen expected to give renegotiation a going over immediately after elections. Now officials fear they won't finish it before the new tax bill comes up. Meanwhile, contractors, gambling on favorable changes, try to keep things in the air as long as possible.

Important NLRB Election

Since the National War Labor Board took the wheel, the National Labor Relations Board has been riding the back seat. But NLRB will be at the controls when union strength is tested in an outstanding open shop—Douglas Aircraft Co.—and at the Dallas (Tex.) plant of North American Aviation.

Douglas's first collective bargaining

election will be staged by NLRB, at the El Segundo (Calif.) plant within a few weeks. It comes at the behest of an A.F.L. machinist's union and with the consent of President Donald Douglas who wired the board for "an immediate election to clear the air of misconceptions and unrest." The telegram followed the C.I.O. auto worker's intervening petition for a test of its membership.

Of particular interest in the Douglas balloting will be the number of votes for "no union." Results at El Segundo will determine whether the unions (or even Douglas) petition for a poll at the Long Beach and Santa Monica plants.

Prime interest in the North American vote will be the indication of whether unionization has kept apace of industrialization in the South. If union majorities are proved in Dallas, demands for wage boosts in line with scales paid at company plants at Kansas City and in California undoubtedly will follow.

Panel Report Hits Union

One of the most strongly worded reports to come from a fact-finding panel is on the National War Labor Board's desk. Even more noteworthy is the fact that a union, rather than an employer,

OPA Rationing Behind Schedule

OPA's shoe rationing order is the quickest "fair shares" job ever turned out by that agency. Cooked up in a few days, the program was put through under such pressure that OPA had no time for frills, such as point rationing, with the result that a \$3 pair of brogans now commands the same surrender value as a \$12 pair.

What this haste signifies is that in certain essential lines, civilian supplies generally are down to the point where a buying spree can change the supply situation almost over night and make rationing mandatory. Moreover, as supply and demand are equated forcibly in one place, civilian cash seeks new outlets elsewhere (often in panic-buying), with the result that rationing will have to be extended over ever-widening fields.

As it now stands, here is OPA's rationing schedule:

Canned goods: March.

Meat and cheese: April.

Fats and oils: May.

Other dairy products: Late spring or summer.

Clothing (principally essential cloth-

ing for war workers): Fall or winter.

If OPA actually sticks to this schedule, it will be a miracle. The government's own red tape upsets fine calculations (canned goods, for instance, originally were scheduled to be rationed last fall), and unforeseen consumer buying panic may develop—as in shoes, which weren't scheduled to be rationed for several months. Nonetheless, more rationing is simply inevitable. Clothing and food, of course, are the big fields for extension. But luxury items, even in the clothing-food field, will be left off the list to absorb some of the excess cash.

In the end though, the luxury cushion may not be deep enough. Here is the vicious cycle: Ever more rationing saves ever more money for consumers; ever more savings mean an ever-widening inflationary gap; an ever-growing gap means an ever-growing realization that you can't eat money and that goods are more valuable than cash; which brings you back to the starting point, that the cycle can only be avoided by draining off the money.

save a train seat

FOR A SOLDIER



*Let us help you cut
down your travel in
New York State*

Is that trip to Buffalo or Rochester or Watertown absolutely necessary?

In these places, as in 36 other cities and towns of New York State, there are Marine Midland Banks whose officers know local people and local business.

They can be helpful in many ways. Perhaps you can use their knowledge to eliminate some travel . . . for the benefit of your company and your country.



Member Federal Deposit Insurance Corporation

WASHINGTON BULLETIN (Continued)

drew the panel majority's fire. Involved are the West Allis (Wis.) plant of Allis-Chalmers and the C.I.O. United Automobile Workers, which long has been a leader of organized labor's left-wing.

On the issues and background of a dispute over union security, the panel charged the union had "made a travesty of collective bargaining" and had "thwarted conciliation efforts in order to force the case to NWLB." Holding the demands ungrounded, the panel asserted that only 16 workers were involved in many of the grievances cited in more than 1,000 pages of union records.

The 45-page report flatly refused the union's maintenance of membership demands, asserting its local leadership was thoroughly irresponsible.

Grade Label Battle Brews

Grade labeling is back in the news again. Although OPA has made mandatory grade labeling of all canned fruits and vegetables this year, opponents of the plan are still busy. They have moved their operations from OPA to Capitol Hill, scene of their previous triumph in excluding grade labeling from the 1938 Food, Drug, and Cosmetic Act.

Opening the new battle is a demand for congressional investigation into the efforts by government agencies to destroy brand names as part of the war effort. A resolution calling for the inquiry has been sponsored by Rep. Halleck of Indiana.

• **OPA Besieged**—Meanwhile, Price Administrator Prentiss M. Brown is being tackled by congressional delegations, citrus growers, and other grade labeling opponents.

Two Views on Liquor

Don't judge the Office of Civilian Supply too harshly. It had tongue in cheek when, in a study of "bedrock" requirements of the civilian population, it set down liquor at only 1% of 1941 production—only enough for medicinal use (page 16).

OCS isn't telling anyone yet that it has recommended release for beverage purposes of 15,000,000 gal. of alcohol from the current quarter's production. Reason is that alcohol production is straining transportation and storage capacity (BW—Feb. 7'43, p20), that the impending whisky shortage is more serious than prospects of an alcohol shortage if distillers are to maintain any stocks.

WPB's alcohol section admits all anticipated requirements for alcohol can

be met out of current production. This means that the present stock of about 74,500,000 gal. will probably be permanent.

• **Rubber's Effect**—A larger stockpile may be warranted if, as some officials think, the synthetic rubber plants consume 50% more alcohol than their rated capacity, but plant men discount this figure by half.

The Butter Question

Faced with rationing, the butter interests have had a hard time deciding whether to jump into the frying pan or the fire.

If butter is rationed and margarine is not, many butter customers may turn to margarine. If both are rationed on the same stamp, it would give unprecedented government recognition to equality between butter and margarine (page 28). The National Dairy Union favors rationing of butter without rationing margarine.

• **Political Fat**—The situation packs political dynamite for OPA rationers and fats-oils experts in all government agencies. Both groups believe butter and margarine should be included in group rationing of edible fats and oils.

Capital Gains (and Losses)

Government administrators who have driven business men crazy with questionnaires are themselves crying about the trouble and expense of answering congressional questionnaires. One agency (WPB) will ask for a special appropriation (perhaps \$100,000) to meet the cost.

Department of Justice probably will ask Congress to amend the so-called Informers Act (BW—Jan. 23'43, p8) so as to reward only persons supplying information backing suits for alleged frauds against the government. As the law stands, persons suing on the government's behalf get a 50-50 cut of damages recovered.

Elimination of commercial lighting displays (BW—Dec. 26'42, p7) may not come this winter. WPB's power division didn't get Office of Defense Transportation and Petroleum Administration backing. The ban was proposed to conserve fuel and transportation, rather than power.

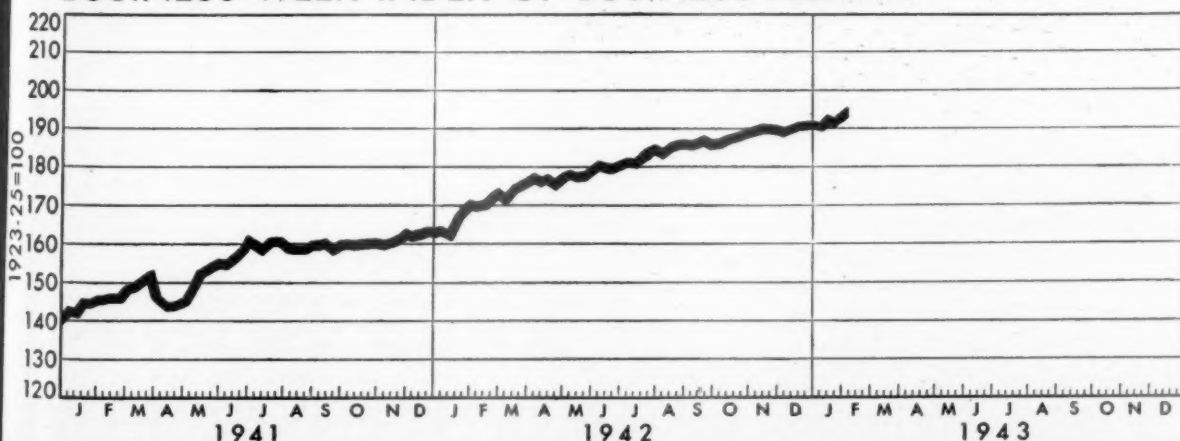
A West Coast aircraft wage stabilization order will soon be forthcoming from the National War Labor Board. Formal decision hadn't been reached by midweek, but it was favored by a majority of the members.

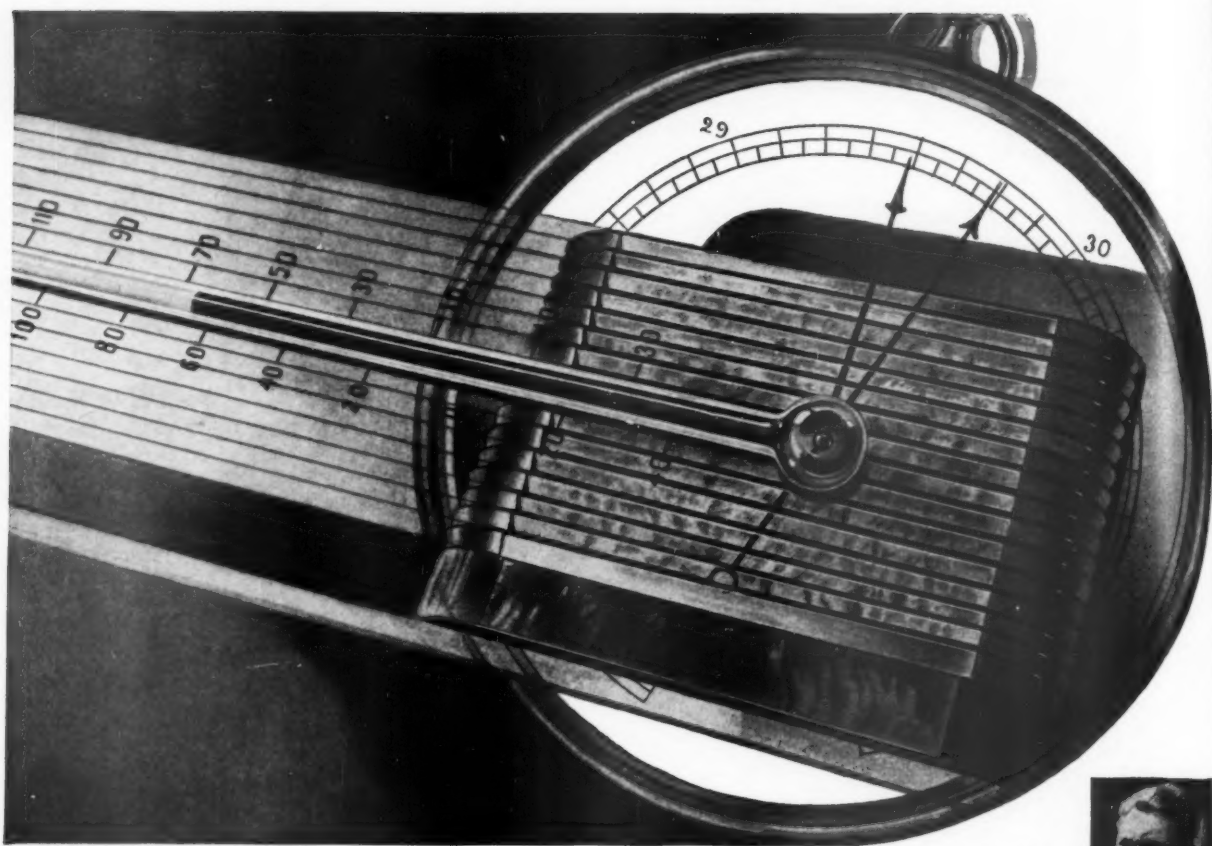
—Business Week's
Washington Bureau

FIGURES OF THE WEEK

	\$ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*195.6	†194.3	191.5	184.9	170.8
PRODUCTION					
Steel Ingot Operations (% of capacity)	99.3	99.5	99.3	96.5	95.5
Production of Automobiles and Trucks	17,195	18,620	17,155	19,240	37,125
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$10,938	\$10,196	\$10,305	\$32,189	\$25,638
Electric Power Output (million kilowatt-hours)	3,960	3,977	3,953	3,637	3,475
Crude Oil (daily average, 1,000 bbls.)	3,853	3,826	3,821	3,970	4,337
Bituminous Coal (daily average, 1,000 tons)	1,900	1,867	1,860	1,867	1,870
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	73	70	73	81	87
All Other Carloadings (daily average, 1,000 cars)	49	47	48	63	49
Money in Circulation (Wednesday series, millions)	\$15,666	\$15,438	\$15,393	\$12,794	\$11,231
Department Store Sales (change from same week of preceding year)	None	†+1%	+5%	-6%	+29%
Business Failures (Dun & Bradstreet, number)	82	138	95	160	241
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	244.8	244.8	243.1	230.2	226.6
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	157.8	157.4	156.9	153.6	153.5
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	202.4	201.8	198.4	183.5	179.6
Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
Copper (electrolytic, Connecticut Valley, lb.)	12.00¢	12.00¢	12.00¢	12.00¢	12.00¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.36	\$1.37	\$1.37	\$1.10	\$1.23
Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.74¢
Cotton (middling, ten designated markets, lb.)	20.52¢	20.56¢	20.41¢	18.48¢	19.19¢
Wool Tops (New York, lb.)	\$1.238	\$1.230	\$1.191	\$1.226	\$1.297
Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
90 Stocks, Price Index (Standard & Poor's Corp.)	83.6	83.0	78.9	67.4	69.7
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.10%	4.10%	4.19%	4.28%	4.28%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.77%	2.77%	2.80%	2.81%	2.84%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.31%	2.32%	2.32%	2.35%	2.37%
U. S. Treasury 3-to-5-year Note Yield (taxable)	1.24%	1.26%	1.33%	1.24%	0.93%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate)	½-¾%	½-¾%	½-¾%	½-¾%	¾%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks	29,743	30,052	28,367	26,138	24,457
Total Loans and Investments, reporting member banks	41,708	41,591	41,344	33,509	30,355
Commercial and Agricultural Loans, reporting member banks	5,921	5,940	6,030	6,408	6,785
Securities Loans, reporting member banks	1,012	926	1,116	957	835
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	28,648	28,567	28,025	19,441	15,431
Other Securities Held, reporting member banks	3,270	3,286	3,284	3,419	3,683
Excess Reserves, all member banks (Wednesday series)	1,700	2,090	2,330	2,246	3,326
Total Federal Reserve Credit Outstanding (Wednesday series)	5,766	5,992	6,378	3,446	2,316
Preliminary, week ended February 6th. † Revised.					
Ceiling fixed by government. § Date for "Latest Week" on each series on request.					

BUSINESS WEEK INDEX OF BUSINESS ACTIVITY





BEN NASH
Industrial Designer



The summer it never got hotter than 68°

You remember *that* summer... it was shortly after the boys came home from Berlin and Tokio. Sure, you could still fry an egg on the sidewalk of a thousand Main Streets and the heat danced before your eyes at the beach... but indoors, *wherever* you went, the air was fresh and cool... 68° cool!

If you think we, here at Durez, are a little ahead of ourselves in our enthusiasm for America's future and the part that Durez plastics will play in shaping that future... just listen to Ben Nash, who designs air conditioning units...

"Just as Durez plastics have helped to bring down the cost of radios and a thousand and one other household appliances, they are sure to be a vital, contributing factor in placing air conditioning within reach of every man's purse. They make an ideal housing for air conditioning machinery. They're so durable—possessing great chemical and moisture resistance, high dielectric strength as well as impact strength. They can be precision-molded to meet the designer's most exacting specifications. *And*

...they offer manufacturers the economy of mass-production. Sooner than you think, it will be just as automatic to include air conditioning in your home, office, school, stores and church as it is to equip them with radiators today!"

There is only one delay... our fighting men first have to come home by way of Berlin and Tokio. As a partner in American industry... Durez pledges its working hours to shorten this long voyage home.

DUREZ PLASTICS & CHEMICALS, INC.
542 Walck Road, North Tonawanda, N. Y.



DUREZ

PLASTICS THAT FIT THE JOB

THE OUTLOOK

New Line of Battle

Byrnes's speech signals effort to make stand against wage and price rises. Order for 48-hour week will have limited effect in shortage areas, create problems elsewhere.

Stabilization Director Byrnes's "tough" speech this week set the tone for business news. Yet, the week's major Russian victories constituted an essential background. For, significantly, Mr. Byrnes prefaced his remarks on inflation and manpower with a forecast of a major European invasion in 1943—a task the Russians are now making ever more feasible.

Impressing Civilians

That invasion will involve heavy casualties. It will also raise the possibility of an early victory. Both will tend to impress restive civilians with the need for, and the short-run value of, sacrificing economic liberties and living standards. So Mr. Byrnes hopes to close that gap between what we must do and what we'd like which widens at each step on the road to total war (BW—Feb. 6 '43, p13).

Most important for the immediate outlook is the support that the Byrnes speech lends to hopes for a firm stand on the price-wage front. It puts "official" stamp to this week's National War Labor Board reaffirmation of the Little Steel wage formula in the case of packing house workers (page 14) and to Administration moves for corn and milk ceilings and production subsidies. Those farm and labor elements now pressing for major increases may yet win out (page 5). But the Administration's declaration of its willingness "to do battle" at least strengthens the odds on maintenance of controls.

Tip on Taxes

As for taxes, Mr. Byrnes's was the first indication of Administration favor for the forced savings form for all "additional taxation of the lower-middle income groups." Its attitude towards the salary limit and the Ruml plan is implicit in the statement that "there should not be even the basis for a suspicion that people in the higher income brackets are not bearing their full share."

Mr. Byrnes's emphasis on the inflationary dangers of excess profits, despite the 90% recapture through taxes, implies further efforts by Price Administrator Brown to absorb higher costs and to reduce prices out of excess-profits-tax-bracket earnings. And this week the

Army and Navy stated that their general policy in renegotiation of war contracts was to cut profit margins to one-third to one-half of the peacetime level, though leaving ample flexibility and exceptions for individual cases.

With this week's shoe order accenting growing shortages of civilian goods (page 92), the Stabilization Director forecast wide extension of rationing and of simplification-standardization in consumer manufacturing.

On manpower, Mr. Byrnes's address was chiefly impressive for its "national service" psychology—though, if anything, the President's executive order declaring a 48-hour week in 32 labor-shortage areas tends to postpone unpopular legislative action.

Hours and Profits

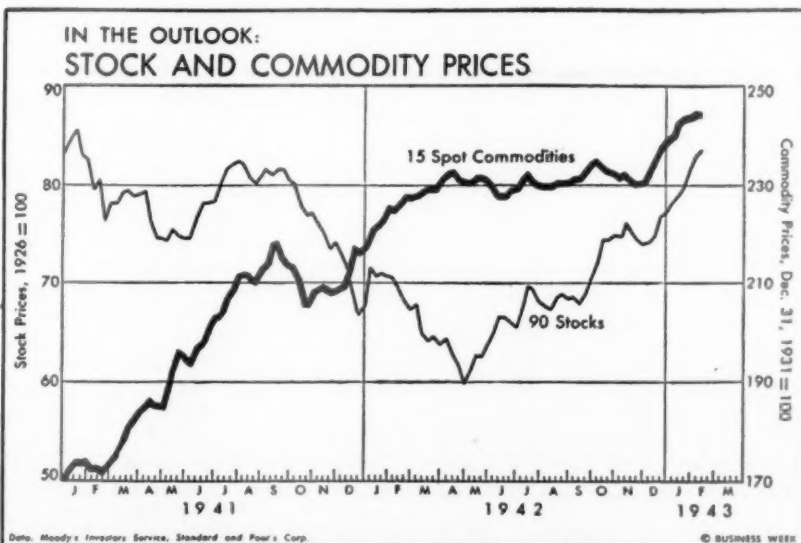
Not that lengthening hours in the critical areas will accomplish much. Most war lines are at the 48-hour-week level now. But when it is extended else-

where, the move may relieve the pinch on production in such lines as cotton textiles (page 103), where manpower runs short but time-and-a-half is unprofitable. However, that will raise many an acute business problem.

During November, average hours were only 40.7 a week in retail trade, 41.1 in nondurable goods manufacturing, 40.5 in communications and power utilities, and equally low in other lines where prices or rates are ceilinged and overtime pay tends to cut profits. The Office of Price Administration's precedent in raising western logger prices to compensate for higher costs in over-40-hour work was recently extended to coal mining. Will OPA grant further adjustments? If not, how will the President's 48-hour rule be enforced where overtime does cut profits?

Rush-Order Trouble

That a managed war economy does not end business uncertainties is made doubly clear by the confusion still reigning among smaller manufacturers, caused by the recent WPB ukase which set a deadline on all orders for components (page 15). Where a small prime contractor, or a subcontractor, has not yet received all his contracts, he cannot commit himself for parts that he may never need, and that it may be



The parallelism of stock and commodity price movements in the past three months has set business analysts to wondering if this marks a return to "normalcy." Normally the two move pretty much together. But the war changed this. Commodities first started rising while stocks deteriorated along with war prospects; then, price

control flattened commodities, while stocks regained confidence in Allied fortunes. Most recently, inflation pressure has lifted commodities and, together with gains in the war, may have helped stocks. It now remains to be seen whether Mr. Byrnes's firm commodity-price stand wins out, and if so, how that will affect stocks.

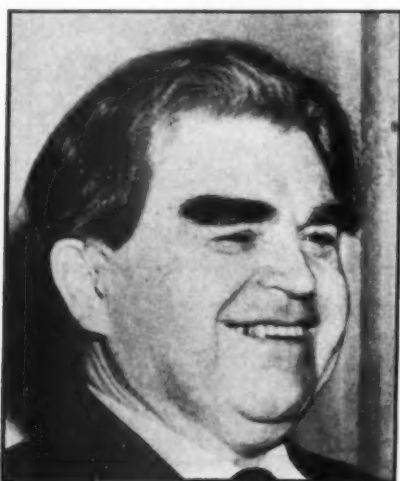
impossible to sell if specifications change.

This last is an ever-present possibility during a war of extreme fluidity in technique and design. More, the entire strategic picture may at any time alter. Confronted now by a vital bottleneck in shipping, which we are exerting great energies to break, it may seem fantastic to suggest that the production emphasis could shift away from ships. Yet, suppose that the shipping bottleneck is broken this year, but that the Nazi fortress of Europe proves more formidable even than we fear.

Balance Unbalanced?

On those conditions, we might require a vast array of land power and at the same time find shipping easier. Then, the present balance between shipping and ordnance would become unbalanced, and materials and manpower would be shunted back to tanks, guns, shells. The all-out battle for Tunisia, soon to be launched, may provide a clue.

Or, to delve again into the realm of possibility, the war might go reasonably well and saddle us with the responsibility of feeding and supplying many millions of Europeans (page 44). That would cut sharply again into civilian supplies, intensifying home-front problems. Indeed, it may well be that the early months of postwar will leave us with less, or at least little more, consumer goods than will be available in the last months of the conflict itself. If so, in studying how to divide our supplies, we shall still need a Byrnes—if not a Solomon.



Involved in one boisterous battle after another ever since his political break with F. D. R. six years ago, climaxed by his leading his United Mine Workers out of the C.I.O. which he had built, John L. Lewis may be on the spot now. His demand for higher wages in the coal mines conflicts sharply with the latest measures to curb inflation.



To the White House went A.F.L. President William Green (left) and C.I.O. President Philip Murray, in agreement on one point: that living costs are getting out of bounds.

Roosevelt was sympathetic but non-committal. The union leaders are seen leaving with Mrs. Anna M. Rosenberg, New York regional director of the War Manpower Commission.

Lewis Stymied?

If it's applied to the coal mines, the 48-hour week order would give miners more than U.M.W. chief demanded.

President Roosevelt's 48-hour work-week decree for war industry (page 5) may turn out to be an effective foil to the bold demand of John L. Lewis for a wage increase of \$2 a day in the nation's coal mines which, if granted, would smash the tottering defenses against inflation.

• **McNutt's Broad Powers**—The interpretative powers that the executive order confers upon War Manpower Commission Chairman Paul V. McNutt are broad enough to cut the ground from under the United Mine Workers' president while, at the same time, giving his 500,000 coal miners more wages than he is asking for them.

With the very audacity of his demand and the solemn tone of his threat to pursue it, Lewis once more had jockeyed himself into a position of pre-eminence in the labor movement. Despite vigorous rank-and-file pressure for higher wages to meet the mounting cost of living, the C.I.O. executive board and the A.F.L. executive council had focused their economic fight on inflation and limited their position on wages to a demand for stabilization and elimination of inequalities.

• **United Front**—Along virtually the entire economic front in Washington, official weight was added to the more

moderate stand of the A.F.L. and C.I.O. The National War Labor Board, in rejecting wage-increase demands for the 180,000 employees of the Big Four meat packers, served notice it was standing pat on the "Little Steel" formula, which permits an increase of no more than 15% over Jan. 1, 1941, wage rates to compensate for a corresponding increase in living costs up to May, 1942. Coal miners already have received about 2% more than the formula contemplates.

Then Price Administrator Prentiss Brown—whose incautious prediction that living costs, up 5% since May, would continue to climb perhaps 4% a month seemed to loose a flood of wage demands—backed down with a statement that he will wage all-out war on further rises in living costs.

• **Loose Ends Knotted**—Economic Stabilization Director James F. Byrnes tied all the loose ends together with his enunciation of the Administration's determination to tighten controls on inflation, with the assistance of the 48-hour work-week edict, by clamping down on wage rates and prices, subject to adjustment of inequalities in both.

This leaves the Administration in a position to drive a wedge between John L. Lewis and his coal miners. For the standard work-week of five seven-hour days, the miner gets \$35, or \$1 an hour. With the \$2-a-day increase Lewis has demanded for him, he would get \$45 a week for the same amount of work, clearly a stimulus to inflation in the Byrnes view that "paying more for the same work makes for inflation, paying more for extra work does not."

• **Would Top Lewis**—But if the 48-

our-week policy were extended to the mines—and there is nothing in the executive order to prevent it—the miner would get \$54.50; that is, standard rates for the first 35 hours, plus 13 hours at time and one-half.

This leaves Lewis two courses in his contract negotiations with the coal operators scheduled for Mar. 14: (1) he must back down in his wage demands—possibly under the threat that the 48-hour week will be extended to the mines; (2) under the U.M.W. no-contract-no-work policy, he must close the mines when his present contracts expire Apr. 1. Lewis hasn't a reputation for backing down, but the succession of events in Washington this week may cause him to revamp his strategy.

• **Strike Would Hurt**—A coal strike would be felt almost immediately in war industry, which consumes the bulk of the industrial tonnage accounting for 80% of the nation's output. Stocks above ground are sufficient for about seven weeks, but they are not too evenly distributed.

The C.I.O. and A.F.L. are in the anomalous position of fearing both victory and defeat for Lewis. Should he win a wage increase for his miners, in spite of the elaborate precautions Washington has set up to head him off, leaders of the two dominant labor organizations must suffer a loss of prestige among their followers.

• **Legislation Feared**—On the other hand, if he loses and carries his determination to a point of losing the mines, the A.F.L. and C.I.O. fear they won't be able to block restrictive legislation which will hamstring all labor unions.

Wilson Wins for Scheduling

Eberstadt's concept of distributing materials and letting parts take care of themselves gives way to system that places primary emphasis on the components.

Life has been sheer hell since mid-January for thousands of material and production control men in industry. They have been faced with two important deadlines, and thousands of them were unable to meet either.

• **Two Requirements**—By Feb. 9, industry was supposed to have filed detailed statements of steel, copper, and aluminum needs for the second quarter of 1943 in order to qualify for material allotments under the Controlled Materials Plan. On Feb. 6, it was supposed to have placed orders with manufacturers for its first half-year requirements of 32 types of scarce parts—valves, bearings, etc.—the so-called "critical components."

The big majority of industrial firms were able to get under the wire by Feb. 9. But the details of CMP regulations and operations are still so unfamiliar, and in many cases so hazy, that thousands of firms were unable to meet the deadline or did so only with the greatest difficulty.

• **Confusion Over Ratings**—The Feb. 6 deadline for placing orders for critical components was worse. It caught most manufacturers completely unprepared, and the instruction reached them, in most cases, only ten days before the deadline. Moreover, when they tried

to place the orders, they found many parts suppliers refusing to accept orders unaccompanied by a preference rating.

First quarter Production Requirements Plan ratings were generally available, but PRP regulations place restrictions on advance ordering. Firms that, in this quandary, appealed to WPB for advice were sometimes told to disregard the PRP rules, sometimes to disregard the Feb. 6 deadline.

• **Wilson-Eberstadt Fight**—It's no consolation to bewildered business men that they are merely innocent bystanders in a bitter intra-WPB dispute in Washington. Partly it's a dispute between two strong and able men—Production Vice-Chairman Charles Wilson and Program Vice-Chairman Ferdinand Eberstadt. More significantly, it's the flare-up of a long-standing battle over what's the best mechanism for controlling the operations of a war economy that's roaring along with the throttle wide open.

In catchwords, the issue is production scheduling vs. material allocation. Donald Nelson's transfer last week of jurisdiction over the Aluminum Division, the Facilities Bureau, and five industry divisions from Eberstadt to Wilson marks a shift in emphasis towards scheduling as the principal control mechanism.

• **Manufacturers' View**—The dispute dates from last fall (BW-Oct. 24 '42, p7) when WPB was in the throes of evolving the Controlled Materials Plan. At that time, the manufacturing industries were arguing for a pure scheduling system. They proposed that the services and the spokesmen for the civilians be required to bring forward, for WPB approval, proposed over-all schedules for production, month by month, of finished goods, together with estimates of the amount of materials needed to carry out those schedules. Once approved, these would be broken down into subschedules for parts. Then each manufacturer would be allowed to buy freely what he needed to meet his schedule.

The material producing industries, on the other hand, were arguing for a pure material allotment scheme under which the Requirements Committee would divvy up the available supplies of material among claimant agencies, let them pass the stuff on down to manufacturers.

• **Emphasis on Materials**—The Controlled Materials Plan, as it emerged from the scrimmage, combined the two plans—side by side. But under Eber-



DESERT BEHEMOTH

A fleet of six jumbo trucks transport the 2,500 tons of ore brought daily from the iron deposits in the desert of San Bernardino to the Kaiser iron and steel plant in Fontana, Calif.

Trucks have a capacity of 25 cu. yd. and a gross vehicle weight of 140,000 lb. Steering wheel shock, often resulting in sprained wrists for the drivers of such heavy equipment, is completely eliminated by hydraulic cylinders mounted on the front axles.

stadt's leadership, the emphasis in CMP has been thrown more and more toward the passing around of allotments, the bookkeeping of material supply. Until the last few weeks, the business of preparing and coordinating production schedules has moved into the background. The mechanics of CMP are such that it is perfectly possible to carry through on all the formal operations without making more than the briefest of nods to scheduling.

Month by month schedules of finished munitions have been prepared; in some cases, the scheduling has gone as far as major subassemblies such as engines and propellers for aircraft. But, for the vast mass of parts and pieces, scheduling has gone no further than a half-filled order book with final delivery dates in it. The definitive CMP regulations, when they came out last month, explicitly legalized treating such an order book as a schedule.

● **Clash of Backgrounds?**—The trend away from scheduling had gone so far that Wilson, assigned to the scheduling job, didn't seem to fit into the picture anywhere. For that reason, the issue has taken on the character of a personal duel as well as an argument. The chief figures are type-cast almost on Hollywood lines.

(1) Eberstadt, the banker, is convinced that a workable control system must be set up in terms of something measurable like tons of steel, must be expressible in debits and credits. He sees a national production schedule as too intangible, too complex, to lean on heavily.

(2) Wilson, the man who came up through the factory, finds a set of interlocking schedules as tangible as his own hand. He feels that only top-to-bottom scheduling can eliminate overlapping and waste. He believes that thorough scheduling would increase arms output from present materials by at least 10%.

● **It Happened by Design**—The general absence of detailed scheduling was clearly revealed by the directive requiring manufacturers to get their orders for critical components on the suppliers' books by Feb. 6. This would have been easy if requirements had been scheduled in advance. The revelation was no accident; Wilson planned it that way.

The one sector of the war job on which Wilson had got a firm grip was stepping up the production of the 32 critical components (BW—Jan. 23'43, p15). An essential part of that job is putting the component-producers on firm schedules—and this means finding out how many of the various components are needed. Right now, no one knows, and the only way to find out is to force the orders onto the manufacturers' books.

● **Enforced Scheduling**—That is why Wilson set the Feb. 6 deadline. He's

aware that the critical components occupy a strategic spot in the economy, entering into thousands of kinds of goods, and he welcomes the chance to enforce scheduling up and down the line by demanding industry's figures on its requirements for these components.

On the personal side of the fight, Eberstadt's prestige was weakened by the growing awareness of the more or less inevitable difficulties (BW—Dec. 19'42, p7) attendant on the introduction of such a sweeping plan as CMP. A prime difficulty is that large sectors of industry still have only the vaguest notion of what is expected of them. Their confusion hasn't been lessened by the gradual, hesitating way in which decisions have been made and rules issued as to the mechanics of the plan. Industrialists have found it difficult to get clear and authoritative rulings on many detailed, but to them vital, points.

● **"A" and "B" Mixups**—One of the sorest points has been the decision as to whether particular products fall into Class A or Class B, a point which affects nearly all a manufacturer's operations under the plan as well as those of his customers. Just a few days before the Feb. 9 deadline, many firms were finding themselves tossed back and forth between the classes almost at an hour's notice.

Theoretically, no great harm is done if a particular firm is unable to get under CMP in the second quarter because of such difficulties; it can get its materials under PRP. However, CMP allotments take precedence over PRP allocations. The simultaneous operation of CMP and PRP creates some danger of overallotment, so the PRP customer may find the cupboard bare. And even if this does not happen, CMP customers are served first, and he is likely not to get until late in the quarter materials he needs to have early in the quarter.

● **Equalized Status**—It may yet prove necessary to do what some business men are now suggesting—make PRP allotments equal in value to those of CMP. In effect, this would make the second quarter operation of CMP a practice-go-round to work the bugs out, leaving its real operation to wait until the third quarter.

Wilson's victory in getting control over more of WPB will not automatically eliminate all difficulties because no changes in the mechanics are now contemplated. Assignment of the aluminum division to him puts control of the aircraft program—from ingot to test flight—under single control and should quiet some of the loudest squawks. The prime change will be noticed in the increased emphasis on scheduling now that Wilson controls the shipbuilding, industrial equipment, tools, automotive, and technical supplies divisions.

Bedrock Concept

With tongue in cheek, OCS visualizes ultimate cut of 32% in civilian economy to 56 billions a year.

Everybody has his own idea about the extent to which he can tighten his belt in wartime—about the barest minimum in shoes, and clothes, and refrigerators, and meat upon which he can survive under pressure.

● **How OCS Sees It**—Government officials, with whom the ultimate decision will rest, are formulating their ideas. In a report submitted last week to Economic Stabilization Director James F. Byrnes, not made public but given wide circulation, WPB's Office of Civilian Supply painted its picture of a hypothetical bedrock civilian economy in this fashion:

	Actual 1941 Supply (Billions of Dollars)	Estimated Bedrock (in 1941 Dollars)	Percent Change
Perishable goods....	\$30	\$20	—33
Semidurables	10	6	—40
Durable goods.....	9	1	—89
Services	32	29	—9
Total.....	\$81	\$56	—32

Specifically, the report indicates that the civilian theoretically could scrape along with 72% of 1941 food dollar volume; 55% of beverages; 75% of tobaccos; 70% of drugs; 47% of toilet goods; 64% of clothing; 29% of semidurable house furnishings; 28% of furniture; 13% of floor coverings; and no jewelry at all.

● **Ducking Snipers**—The foregoing Office of Civilian Supply figures pertain to a never-never world to which U. S. citizens probably won't descend. Therefore, the really important angle is that OCS got up such a compilation at all.

Fact of the matter is that OCS is worried over the sniping that's being directed its way by business men. Sen. James E. Murray's small business committee recently heard trade associations by the score lambaste OCS for cutting civilian supplies rather than augmenting them (BW—Jan. 30'43, p17). Now the National Retail Dry Goods Assn. has suggested that an independent office of civilian supply be set up to supersede the present WPB division.

● **Could Be Worse**—Hence OCS has undertaken to reassure the civilian economy that (1) there really is a point at which further cuts would endanger civilian morale, and (2) although the economy has taken a beating, it isn't as bad as it might be.

Necessarily, OCS's bedrock figures are the result of equations filled with many a variable—chief of which is the

X that represents civilian morale. Nobody expects that the economy will sink to the \$56,000,000,000 bedrock level in 1943—and very likely not in 1944, due to high inventories and current levels of production. More, the bedrock calculation is very tentative, will change significantly depending on whether the war is long or short.

• **Five Premises**—OCS worked out the theory of minimum feasible civilian needs with five main assumptions in mind: (1) An industry is down to bedrock when further production cuts wouldn't be worthwhile as savers of manpower and material; (2) the population must not be reduced to siege-economy levels; (3) you can't run on existing inventory "fat" forever but must rely on new production in the long run; (4) the best idea is to plan for an "even keel" in a long war, rather than how to "get by" in a short one; and (5) civilian morale is an important factor.

In the end, OCS wound up by figuring that foods, liquor, tobacco, and other perishables can conceivably be shaved down one-third from 1941 levels; clothing and home furnishings can be cut 40%; durable goods virtually can be shut off; and services can be cut about 10%. OCS points out, however, that the cut is based on dollars, not units. Cheaper merchandise, or the wide use of standardization and simplification, would not make the unit cut as deep.

• **Not Based on Sales**—Statisticians will be quick to note that the OCS figures on the actual supply of goods and services in 1941 are not the customary Dept. of Commerce data. Whereas Commerce usually shows supplies in terms of retail sales, OCS calculated them in terms of manufactured product augmented by an average markup. Also, OCS got the tremendous total of \$32,000,000,000 for 1941 services by including public education, local charity, and imputed estimates of the service value derived from existing living quarters. For purposes of clarity, the Dept. of Commerce and OCS are trying to find some middle ground.

Realists will note another discrepancy: Whereas OCS's bedrock contemplates a fairly small reduction in such luxuries as tobacco and beverages (except hard liquor, of which 1% of 1941 consumption is deemed sufficient if we had no inventories whatever), the War Manpower Commission has classified men aged 18 to 38 in these trades as non-deferables.

• **Jockeying for Position**—In the last analysis, the OCS estimates are probably intended to fortify the agency's position in the scramble for materials. Inasmuch as OCS has decided to put in some genuine civilian claims under the Controlled Materials Plan (BW—Jan. 30'43,p15), the figures will provide moral backing in an argument with the rest of the claimant agencies.

Mystery Deepens

Livestock isn't coming to yards despite record numbers on farms; country slaughter and bootlegging suspected.

More pigs were farrowed in the U. S. last spring than ever before. All through the fall, packers were on pins and needles lest they be overwhelmed by the flood of young porkers that would normally come to market in early winter.

• **What Happened?**—What actually happened has the government and industry experts stumped, has thrown the national meat statistics all out of whack. The Department of Agriculture's revised goal for 1942 hog slaughter was 83,000,000 head, but only about 79,000,000 were killed. The other 4,000,000 little pigs didn't go to market.

Similarly, last year's population of cattle and sheep on farms and ranges was extremely large, and so were all expectations of slaughter. The D. of A. set a quota of 27,000,000 cattle and calves, but a million of these failed to materialize. Sheep and lambs topped the quota, but for an unhappy reason. The D. of A. goal was about 23,000,000, but western sheep ranchers lost so many herders to the draft and to war plants that they had to sell huge numbers of young breeding ewes, boosting the slaughter to almost 29,000,000.

• **Totals Impressive**—Though they fell below D. of A. quotas, the aggregate slaughter figures are nevertheless impres-

sive. Normally about 67% of all slaughter is federally inspected, hence total figures must be weighted accordingly.

Federally inspected slaughter for 1942 set a new record in every class. The total was 93,628,000 animals, 13% above the previous record year. For cattle, it was up 13% over 1941, calves up 5%, hogs up 16%, sheep and lambs up 19%. Total federally inspected slaughter of all species in December, 1942, was over 10,000,000 head, 16% above the previous record December. (Horsemeat is insignificant; annual U. S. slaughter of horses is between 25,000 and 30,000 head, about 0.0002% of all meat animals slaughtered.)

• **Marketings Still Short**—While the year's total was reaching new highs, each month of the final quarter fell far short of predictions and of actual needs. The runs of livestock to market continue abnormally light in relation to total meat animals in the country, and the trend is holding through early February. Nobody now expects the peaks that were confidently awaited last December. Major packinghouses are operating far below capacity. Instead of an increase, figures for January show a decrease from a year ago (total federally inspected slaughter, 000 omitted):

	January	
	1942	1943
Cattle	1,057	927
Calves	440	330
Hogs	5,830	5,430
Sheep & Lambs.....	1,611	1,724

• **It Pays to Fatten Them**—Reason for the short supply of slaughter animals



BYPRODUCT—GOLD

Permission from WPB to resume gold mining on a limited basis has been granted to Golden Cycle mill and other gold producers in Colorado's Cripple Creek district, but

with a former slag discard—zinc—as the objective. Once shippers were penalized when ores contained excess zinc content, but now Golden Cycle's machinery has been converted to handle zinc-bearing ores and is ready to mill up to 450 tons daily.



WITHOUT LEATHER

Those inventors and manufacturers who have been using strange materials for footwear may be in line to reap rewards in the face of this week's



shoe rationing (page 92). One is Elliot E. Simpson, New York, who hardens fabric soles (left) with plastics or reclaimed rubber, and treats wooden soles (right) to replace leather. Needed only are nonleather uppers.

cannot be price, because shippers are getting fancy returns from desirable lots. One reason for the holdback is doubtless that heavy hogs, contrary to peacetime precedent, are bringing top prices; the corn-hog ratio is favorable to feeding hogs out to top weights, and average weights today are about 8 lb. to 10 lb. heavier than a year ago, while Omaha, Sioux City, and some other western markets run 15 lb. to 20 lb. heavier.

Contributing to the hog shortage is the farmer's desire for a huge pig crop next spring; to accomplish this, he is breeding many gilts which would normally be marketed now.

• **Small Town Slaughter**—But many experts are guessing that a principal reason for shortages of animals at major packing centers is a tremendous slaughter that is not counted in official figures because it never touches normal commercial channels. Certainly, folks on the farms and in the villages are stocking up their cold-storage lockers, their smokehouses, and their canned-goods cellars with backlogs of meat against eventual rationing. Almost every small town has its slaughterhouse running overtime on locally raised hogs and cattle.

Farmers are legally entitled to sell as much meat as in the corresponding month last year, and there are no limitations on their sales of live animals. Beyond doubt, they are dressing meat for sale to their full legal limits, and since no records exist of their last year's kill, some may be inching up a bit.

• **Bootlegging Stories**—All manner of tales indicating the bootleg diversion of livestock are heard over luncheon

tables at the Saddle & Sirloin Club in Chicago's stockyards. Samples: Last Sunday, 17 passing automobilists drove into one Illinois farmer's yard seeking meat. Week ago Friday, the six-man hog-killing crew of a small plant was A.W.O.L., on Monday bragged each man had earned \$75 in three days of killing and dressing hogs for farmers nearby.

Black markets exist in every sizable city. The details vary from back-alley slaughter by unlicensed establishments to a system of folding-money tips extorted by packers' salesmen. Big packers, too conspicuous for skullduggery, are well in the clear. But small fry claim they cannot exist within legal limitations.

• **More Prosecutions**—OPA achieved its first penalty for meat ceiling violations last week when a court fined a small Pennsylvania packer. This week, OPA attorneys have been rampaging in most big cities. In Chicago, 30-odd suits were entered last week, and the local OPA office was rumored to have 150 black-market indictments in the works, and Milwaukee felt a similar epidemic coming on. As the effective retail prices rise, the industry notes an increasing urban clamor for ceilings on livestock prices. Disagreement exists among the larger packers on the advisability of livestock ceilings, but most of the little fellows want the financial relief they believe this would bring.

Meanwhile, of course, housewives throughout the nation were unable to find at their usual stores the cuts of meats they desired, and the experts agree there will be no early improvement in the meat supply. Total meat

tonnage available for civilian consumption stands between 50% and 60% of last year.

• **Mixup Over Lend-Lease**—Government meat buyers are also having their troubles. Early this month they were in closed-door sessions with Chicago packers because desired supplies of lend-lease pork and lard were dragging, while packers' inventories of these products were building up faster than for years. Sole plausible explanation is a shortage of export boxes. Tangible fact from industry estimates is that of the total January production of 1,045,000,000 lb. of pork and lard, lend-lease purchased only 215,000,000 lb.—approximately 20% of production, instead of the 40% it expects.

Military purchases are taking substantial shares of total beef slaughter and a smaller but significant fraction of lamb. But the relative importance of pork in the lend-lease program is indicated by the published figures of purchases from March, 1941, through January, 1943: pork 3,263,000,000 lb.; beef, 13,000,000; veal, 3,000,000; lamb, 39,000,000; mutton, 5,000,000.

• **Snagged by the Quota**—Difficulties of assorted kinds abound in the industry. Last week, for instance, several Chicago pork processors and sausage manufacturers were shut off from raw materials. The slaughterer who usually kills hogs for them had inadvertently exceeded his OPA quota, hence could not legally kill their hogs even on contract. So the sausage makers were in danger of defaulting on government contracts.

Chaos such as currently plagues meat supplies would long since have brought federal rationing upon any less complex but equally essential commodity. Washington has been talking tough ever since early fall, but the date of compulsory rationing keeps receding like a mirage.

The doubters reason about as follows: Nobody has ever exhibited a workable point-system schedule for meat rationing. (Not even Britain, with all its experience in point rationing, has tried to apply this scheme to meat.) The British system of money-value meat rationing—currently 2 shillings 2 pence per person per week—requires restricting the customer to a single store, which runs counter to all U.S. tradition. Further, say these skeptics, if OPA cannot enforce so relatively simple a meat program as price ceilings, would its bosses stick their necks out by undertaking the infinitely more difficult program of individual rationing?

• **Difference of Opinion**—Voluntary rationing's performance to date is highly regarded in the meat business, if not in OPA's meat section. Usual view of packers and their friends is that voluntary rationing deserves credit for keeping the present situation from a complete runaway.

Used Cars Perk Up

Wholesalers scramble in eastern market for gasless buggies, then ship them West where there are avid buyers.

Used car business has had a shot in the arm. Wholesaling of secondhand vehicles has suddenly begun to move under a solid head of steam with stocks accumulated in the gas-parched East flowing steadily toward markets in western areas.

• **Break for Western Dealers**—Tightening restrictions on driving, climaxed by the mid-January ban on pleasure trips, worked at first to reduce prices offered by dealers to private sellers. At the same time, western and industrial areas, less stringently rationed, have had a steady demand for used cars and are filled with dealers in a position to survive by meeting that demand.

The low eastern prices spelled the answer. Buyers from the West moved to the East; wholesaling has been mounting ever since on the seaboard.

• **A Changed Market**—Wholesalers of used cars act like middlemen in any business. They buy in quantity where supply exists and sell—in volume or piecemeal—where they find demand. Formerly they did their buying in Detroit and other midwestern cities where trade-ins were plentiful. But those sources were drying up, and they welcomed the opening up of supplies from the East.

The picture has been stimulating to all others in the business, too (except the private sellers in the East, who have been disposing of their cars at below-normal prices).

• **Most Welcome Volume**—The eastern dealers, having first lowered their prices to the wholesalers, have been jacking them up as they smelled the demand and are making margins of a size most welcome these days. And the midwestern, western, and southwestern dealers who are buying from the wholesalers are finding that the imported cars are a real business stimulant.

Purchases at wholesale of used cars, in fact, are being made by some dealers who in the past have steered clear of lot stocks by selling them to the middlemen as received.

• **The Biggest Buyers**—Texas, Michigan, Oklahoma, and California buyers have dominated the eastern markets. New York is a favored buying spot for these cash-in-pocket customers as are Pittsburgh, Philadelphia, Boston, and other Coast cities. Transactions of the past fortnight, indicative of the type of business being done, included a purchase of \$30,000 in cars by a Cleveland dealer from a New York City lot.

Activated by flurries like that one, classified ad columns in eastern papers are filling out pleasantly with calls for used cars, appealing to private owners who see little prospect of using their vehicles except at minimum mileage levels. The swelling demand has boosted prices to levels prevailing last year at this time.

• **Shipping Methods**—Once sold, the used cars move from East to West by truck-trailer, tow-bar, and, for long hauls, by rail. One buyer even uses the radio in New York to seek families to drive his cars to California—the migrants being told they can then seek defense jobs on the West Coast.

Some aspects of the picture worry easterners. They fear that (1) as new war industries spring up, private transportation will not be at hand for the workers, and (2) their secondhand car lots will be stripped of stock when war's end winds up gas rationing. A market for cars will start again, and car dealers like nothing less than the prospect of having to face buyers without cars to sell them.

• **Pity This Poor Man!**—But for the time those thoughts are secondary in the minds of dealers who are busy concocting ads like this one, which recently appeared in the classified columns in Pittsburgh:

"Man gone crazy with lots of money . . . hog wild to pay high prices for secondhand cars."



EASTERN BONANZA

Treasure-trove for western car dealers with empty lots is the bountiful used car supply in 13 eastern states under the pleasure driving ban. One of the first to act was Fred Scaife (he calls himself California's Smiling Irishman) who came from Los Angeles to New York and began advertising "free trips to the coast" over five Gotham radio

Population Shifts

Census official takes a look at postwar cities through eyes of sugar registrar, and predicts their future.

The Census Bureau's assistant director, Dr. Philip M. Hauser, has found a new use for OPA's sugar-rationing data. He's using the figures to prognosticate the fate of the major metropolitan districts in postwar days.

• **Checked Past Performance**—Hauser's results are obtained by a statistical method called extrapolation. In simple English, it means projecting past trends into the future. Hauser took 137 metropolitan counties—that is, counties whose populations are concentrated 50% or more in big-city districts—and noted their population performance on the basis of census reports for 1920-30 and 1930-40. Then he observed the latest trends by calculating the difference between 1940 census figures and OPA's sugar registrations for 1942. Thus he got a pattern (later checked by observation) which enabled him to make the prophecies that appear in the accompanying table.

Areas designated by the letter "A" are those that are enjoying a rapid wartime growth after steady population

stations and in newspapers. His plan calls for volunteer drivers plus two passengers to divide the \$35 gasoline cost, leaving no freight charges, while insurance and advertising overhead (\$125 per car) are easily absorbed by healthy West Coast sale prices. Scaife is in the market only for "sharp" late model cars, says he has sent 600 of them West carrying 1,500 riders to Los Angeles within the past 50 days.

Cities of the Future

Dr. Philip M. Hauser, assistant director of the Bureau of the Census, has tackled the question of which cities will retain their wartime popu-

lation in postwar days. Here are his predictions (for the statistical method on which Hauser's conclusions are based, see accompanying article):

Class A-1 Areas
(Most rapid wartime growth plus best prospects of retention):
Corpus Christi, Tex. Jacksonville, Fla.
Dallas, Tex. San Antonio, Tex.
Jackson, Miss. San Diego, Calif.

Class A-2 Areas
(Most rapid wartime growth plus superior chances of retention):
Charleston, S. C. Mobile, Ala.
Columbia, S. C. Washington, D. C.
Columbus, Ga. Galveston, Tex.

Class A-3 Areas
(Above-average wartime growth plus excellent prospects of retention):
Atlanta, Ga. Knoxville, Tenn.
Austin, Tex. Little Rock, Ark.
Beaumont-Port Arthur, Tex. Los Angeles, Calif.
Chattanooga, Tenn. Nashville, Tenn.
Detroit, Mich. Sacramento, Calif.
Fort Worth, Tex. San Francisco, Calif.
Houston, Tex. Shreveport, La.
Kalamazoo, Mich.

Class A-4 Areas
(Above-average wartime growth plus good prospects of retention):
Augusta, Ga. Norfolk-Portsmouth-Baltimore, Md. Newport News, Va.
Davenport-Rock Island-Moline (Ia. and Ill.) Portland, Me.
Denver, Colo. Salt Lake City, Utah
Evansville, Ind. Savannah, Ga.
Indianapolis, Ind. Seattle, Wash.
Macon, Ga. Tacoma, Wash.
Wilmington, Del.

Class A-5 Areas
(Above-average wartime growth plus fair prospects of retention):
Canton, Ohio Hamilton-Middle-town, Ohio
Chicago, Ill. Portland, Ore.
Cincinnati, Ohio Pueblo, Colo.
Columbus, Ohio St. Louis, Mo.
Decatur, Ill. Springfield, Ohio
Fort Wayne, Ind.

Class B-1 Areas
(Rapid wartime growth after rapid pre-depression growth; chances of retention dependent on ability to convert after the war):
Birmingham, Ala. Hartford-New Britain, Conn.
Dayton, Ohio Rockford, Ill.
El Paso, Tex. Tulsa, Okla.
Wichita, Kans.

Class B-2 Areas
(Boom areas which may or may not be able to convert after the war):
Bridgeport, Conn. New Haven, Conn.
Johnstown, Pa. Akron, Ohio
Louisville, Ky. Waco, Tex.

(Note: Milwaukee does not appear on this list because of unsatisfactory data; ditto Montgomery County, Alabama).

Class C-1 Areas
(Losing population or barely holding their own, but chances of "comeback" excellent):
Amarillo, Tex. Oklahoma City, Okla.
Asheville, N. C. Peoria, Ill.
Binghamton, N. Y. Stockton, Calif.
Charleston, W. Va. Winston-Salem, N. C.
Charlotte, N. C. Miami, Fla.
Lansing, Mich.

Class C-2 Areas
(Only slightly lower in rank than Class C-1, above):
Durham, N. C. San Jose, Calif.
Madison, Wis. Tampa-St. Petersburg, Fla.
Memphis, Tenn. Waterloo, Ia.
Phoenix, Ariz.

Class C-3 Areas
(Fair prospects of a "comeback"):
Cedar Rapids, Ia. New York-Northeastern New Jersey
Des Moines, Ia. Jersey
Flint, Mich. Roanoke, Va.
Fresno, Calif. Spokane, Wash.
Huntington-Ashland (W. Va. and Ky.) Springfield, Mo.
Minneapolis-St. Paul, Minn. Topeka, Kans.
Youngstown, Ohio

Class D-1 Areas
(Losing population or growing very little; hard to evaluate):
Atlantic City, N. J. Kansas City (Mo. and Kans.)
Cleveland, Ohio South Bend, Ind.
Grand Rapids, Mich.

Class D-2 Areas
(Losing population or growing very little; little prospect of rapid postwar growth):
Allentown-Bethlehem-Easton, Pa. Philadelphia, Pa.
Buffalo-Niagara, N. Y. Providence, R. I.
Erie, Pa. Springfield-Holyoke, Mass.
Harrisburg, Pa. Terre Haute, Ind.
Omaha-Council Bluffs (Neb. and Ia.) Trenton, N. J.
York, Pa.

Class D-3 Areas
(Losing population with little chance of recouping):
Albany-Schenectady-Troy, N. Y. Reading, Pa.
Altoona, Pa. Rochester, N. Y.
Boston, Mass. Saginaw-Bay City, Mich.
Duluth-Superior (Minn. and Wis.) St. Joseph, Mo.
Fall River-New Bedford, Mass. Scranton-Wilkes-Barre, Pa.
Lancaster, Pa. Sioux City, Ia.
Lincoln, Neb. Springfield, Ill.
Manchester, N. H. Syracuse, N. Y.
Pittsburgh, Pa. Toledo, Ohio
Racine-Kenosha, Wis. Utica-Rome, N. Y.
Wheeling, W. Va.
Worcester, Mass.

Hauser won't bet that his predictions are right in every instance, for OIA's sugar data is to some extent pretty crude. Furthermore the extrapolation method is a rigid mechanical procedure. However, Hauser is willing to argue that on the whole the prophecies are bound to be correct.

● **New Technique Needed**—Fearing, however, that over-zealous marketing men will read the data too casually, Hauser two weeks ago told the American Management Assn.:

"Failure of the population to increase rapidly or a declining population do not necessarily require that business stop its expansion or begin contraction. For one thing, a stabilized or declining population may possess great purchasing power even without population growth. . . . Such areas should not be written off as lost or fading markets, but rather regarded as a special kind of market which may require changes in marketing techniques and more intensive cultivation."

Other data turned up by Hauser: **Highest numerical population gains** have been registered by Detroit (gain of 336,000), Washington (231,000), Chicago (149,000), Los Angeles (131,000), Norfolk - Portsmouth - Newport News (107,000), St. Louis (97,000), San Diego (97,000), and San Francisco-Oakland (95,000).

Biggest wartime loser is the New York-Northeastern New Jersey metropolitan district (365,000).

"The Pacific, South Atlantic, and East North Central States made considerable population gains as a result of the war at the expense of the Mountain, West North Central, and Middle Atlantic States."

NELSON'S TIME TROUBLES

Complaints were mild when Congress ordered the nation's clocks advanced one hour to conserve power with "war time." Now Washington is getting the backwash of farmers' opposition while some states are legislating their own clocks as Georgia did (BW—Feb. 6 '43, p. 22).

Unless dissuaded by WPB Chairman Donald Nelson, Michigan clocks also will revert to standard time next week under authority of the state legislature. Meanwhile, Ohio is toying with the idea of joining Michigan and Georgia in the central time belt. To Nelson, such secessions represent a threat to American power capacity.

Following discussion of the change with delegations from Ohio and Michigan, the WPB chief released statistics showing those states saved almost 20% of the 1,500,000,000 kw-hr. of electricity conserved last year by "war time." While thus urging no change, Nelson promised no opposition should the Interstate Commerce Commission declare Michigan in the central zone to relieve undue hardship.

increases in the 1920-30 and 1930-40 periods. These areas may be expected to retain a good share of their gains.

● **B Stands for Boom**—The "B" areas are spectacular boom towns. Their populations have grown recently by leaps and bounds, though prior to that time increases had been fairly slow. Population increments may be temporary unless these cities can convert after the war.

The "C" identifies the "comeback" group. The war has robbed these areas of population, or slowed the rate of increase almost to a standstill. But on the basis of past performance, they'll recoup after the war.

● **Doubtful Areas**—Last is the "D" group. The fate of these areas is dubious, for they show neither wartime gains nor impressive prior peacetime gains.

Reporting on Current Steel Stocks

As you may know, the steel warehouse industry entered the war period with large and complete stocks. These reserve stocks of steel enabled industry to switch over quickly from peace to war production. However, in the process, stocks of steel in the warehouses of the country became seriously depleted. In fact, these great sources of emergency steel became almost non-existent.

No matter how carefully plants are maintained and production programs scheduled, there are always times, particularly under our heavy war load, that certain lots of steel must be secured immediately or production is imperiled. So companies working at top speed and embarrassed by their inability to secure steel quickly from warehouses, began reporting their problems. The War Production Board was quick to grasp the situation and assign special allotments to the warehouses. A bad situation is now gradually being improved and we are glad to report that our stocks are somewhat better assorted.

In order to eliminate the time required for many roll changes and so to permit increased overall production of steel, we are concentrating on the most generally used sizes. In spite of this curtailment of our usually very broad range of sizes we are now better able to serve than at any time in recent months.

When you need steel or have a problem of selection or fabrication, get in touch with your nearest Ryerson Steel-Service Plant. Our engineers and metallurgists will be glad to work with you. Joseph T. Ryerson & Son, Inc., Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.

RYERSON



Control of the Air Starts Here!

So that American warplanes can control the air above the battle fronts, American manufacturers are controlling the air on the production fronts. That holds true in the production of all kinds of precision equipment where extremely close tolerances are musts. Parts that pass inspection today can be out several ten thousandths of an inch tomorrow, due to a 15 degree change in temperature. To speed up production . . . to reduce rejections . . . to prevent the damages of rust, dust, and corrosion . . . the air conditioning equipment for your plant must be *precision-fitted to the need of your plant.*

Seldom are two air conditioning problems identical. For that reason, Fairbanks-Morse maintains branch offices throughout the country, with resident staffs of engineers at each branch. You will find the resident engineer in your community the man with whom to talk. He is familiar with your local conditions and his judgment is not limited by a restricted line. The F-M line is *complete.* To meet him, write Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago, Ill. Branches and service stations throughout the United States and Canada.

Have you heard about F-M TIP COOLERS for spot welders?



FAIRBANKS-MORSE

Air Conditioning and Refrigeration Equipment

Rubber Deal Set

Field of yielding shrubs narrowed to three with drafting of agreement for development of cryptostegia.

Competition among flowers, weeds, and bushes for important places in America's rubber program has been narrowed to a field of three. Guayule, kok-saghyz, and cryptostegia all seem destined to have a share. Goldenrod, poinsettia, mistletoe, rabbit bush, milkweed, and numberless other latex-sap plants will stay in vacant lots and gardens.

• **Cryptostegia Deal**—This week's rubber news was made when Rubber Reserve Co., acting for the Board of Economic Warfare (BW—Jan.23'43,p8), submitted plans for a 50,000-acre cryptostegia project to Mexican officials for final approval.

However, guayule, the desert-growing rubber shrub being harvested in both Mexico and the United States (BW—Oct.3'42,p24), will nose out other competitors in total 1943 output with a hopeful 6,000 tons. Cryptostegia, already grown and processed mainly in Haiti, will place second with a possible 5,000-ton output. Rubber from kok-saghyz, the Russian-bred dandelion which yields the U.S.S.R. as much as 200,000 tons a year, is still measured here in hundreds of pounds and is be-

ing grown on an experimental rather than a commercial basis (BW—Dec.12'42,p97).

• **Salinas Operation Due**—Next week the first guayule rubber will roll from the new mill at Salinas, Calif., which will consume the harvest of a 550-acre tract nearby during the next three months by 24-hour-a-day operation. Government-sponsored guayule planting will blanket half a million acres in Texas, New Mexico, Arizona, and California by 1945.

That the Salinas project is so far advanced is due primarily to its inception in 1930 under the management of Intercontinental Rubber Co., which transferred ownership to the government last March for \$1,721,235. Estimators place guayule output at a 25,000-ton level in 1944 with a possible 80,000 tons in 1945.

• **Seeds from Kuibyshev**—The 18,000 lb. of kok-saghyz roots harvested last fall at 120 national forest nurseries in 42 states under the aegis of the Dept. of Agriculture sprang from seeds flown from Kuibyshev to Washington in May, 1942. Late planting made last year's harvest smaller in rubber content—roughly 4% to 6% of dried root weight or 1% undried—and most of the plantings were unharvested to test overwintering capacity of the plants under U. S. climatic conditions. In the future is a government-planned 2,000,000-acre kok-saghyz program promising from 100,000 to 200,000 tons of rubber.

Cryptostegia, a shrub of the milk-



Sap from 5,000 shoots of the cryptostegia plant—a day's work—nets each worker one pound of rubber. Plants can be tapped on alternate days, year in and year out, on the semitropical island of Haiti.



Will your product be on this Strato-train?

When the war is won, thousands of long-range bombers and troop transports, and trains of invasion gliders will be available for cargo use. Tomorrow they may carry air-freight through the stratosphere at great speed. These strato-trains of the future would shrink space and time and radically change merchandising and distribution methods.

High speed air-freight, for example, would make possible international fresh-flown foods. It would help to cut down spoilage and perishability. But it would demand changes in packaging, too, for bulk and weight would

have to be reduced to a minimum and yet adequate protection would have to be provided.

We do not presume to be prophets. But we are training our sights on the future, just as you are. We believe Cellophane has inherent advantages that fit it to play an important part in post-war merchandising.

Right now we are gathering invaluable experience in packaging under the rigorous requirements of war use. For Du Pont Cellophane is protecting supplies for our armed forces throughout the world, from field rations and medical supplies

to cables and carburetors.

We should like to keep you informed of developments as they occur, and will gladly place your name on our mailing list for periodic packaging bulletins.

E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington, Delaware.



Cellophane

weed family, grows wild in the Southwest, Central America, and Haiti. After being kicked around Washington in the days when everybody drove automobiles, cryptostegia became the baby of the Haitian-American Agricultural Development Corp. (S.H.A.D.A. to the French-speaking islanders) as a 100,000-acre project likely to cost up to \$46,000,000. S.H.A.D.A., under the direction of Thomas A. Fennell, is a binational good-neighbor enterprise, and its rubber experiment got a green light from the Board of Economic Warfare and Rubber Reserve Co. last year.

• **Immediate Planning**—The 50,000-acre project for Mexico will give that country a \$25,000,000 slice of American good neighborliness. Mentor of the scheme, and one of the first advocates of cryptostegia, is Miles Sherover, former assistant chief of the Rubber Division of BEW and organizer of Venezuela's only tire factory (BW—Feb. 10 '40, p. 58). Sherover spent seven months trying to sell the Mexican project to BEW, then got a go-ahead from Rubber Reserve only two weeks after it took power over foreign rubber purchasing away from that agency. Plantings will start just as soon as Mexico approves the deal.

Cryptostegia became a commercial crop for rubber more than 60 years ago, was an important source before the automobile spurred Brazilian (and later Far Eastern) cultivation of Hevea trees. Madagascar and Eastern India were the principal sources. Eventually growing to 6-foot heights, cryptostegia can be planted from seed and tapped after only 6 months—a speed-up just announced in Haiti. Ideal locations for cryptostegia must have a superabundance of low-cost labor to permit economical exploitation. Both Mexico and Haiti fill this bill.

• **Trough Catches Sap**—Cryptostegia is planted in close double rows six feet apart with almost 10,000 plants to the

acre. Boards paralleling each double row of plants are erected, shoots are tied or hooked to overhang, and a small trough is hitched to the board to catch the sap from 15 to 50 shoots simultaneously tapped.

Unskilled laborers have averaged between 4,000 and 5,000 plants a day with a per-diem rubber take of about 1 lb. per worker. The plant produces 0.1 gram of rubber per shoot per tapping, and tapping is done on alternate days throughout the year. About 20% of the total rubber output is obtained from the globules which harden on the shoot tips after tapping.

• **Results in Haiti**—On the basis of preliminary investigation of Haiti's project—about 30,000 acres have been planted, and new planting will reach a rate of 3,000 to 4,000 acres a month by April—the minimum rubber output per acre will exceed 200 lb. with maximum estimates running as high as 750 lb. per acre. On the basis of minimum output, Haiti should yield 5,000 tons of rubber this year.

While cost estimates are difficult to make until production problems have been met and solved, at maximum output the cost might run below 50¢ a pound, which is considerably greater than the cost of Hevea.

• **Agriculture Helping**—With natural rubber stocks dwindling and synthetic production limping over the horizon at least two months behind schedule (BW—Jan. 23 '43, p. 17), the emergency efforts of American agronomists may yet stop the gap between the two. The Dept. of Agriculture is paralleling the frantic plantings of these rubber sources with technological research designed to put them on a more economic cost basis. Equipment to sow, weed, fertilize, and harvest or tap the plants is being invented or obtained by conversion of existing types of farm machinery.



Kok-saghyz, once used for Russian chewing gum, is the specially bred choice of 609 plants tried for latex content by Soviet scientists—now a potential United States source of home-grown rubber.

Altering Planes

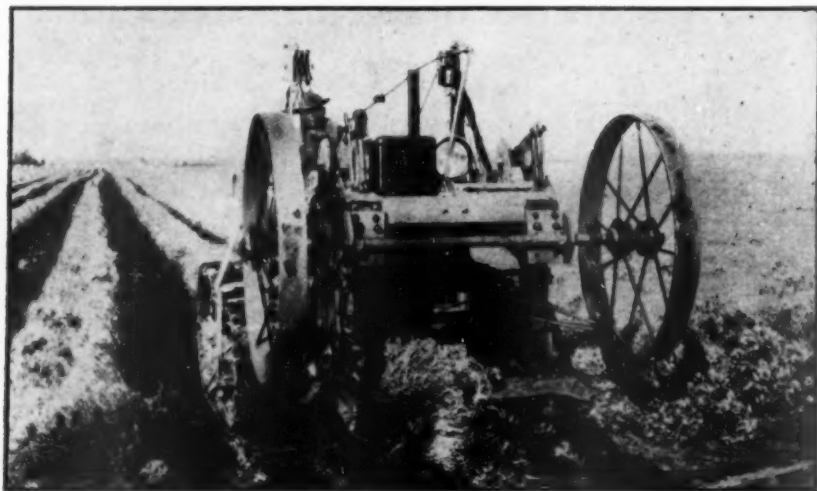
Major and minor changes in aircraft design are made at special centers, averting production slumps.

Keeping our military aircraft one jump ahead of the enemy's best means continuous design change; each front has its own peculiar requirements. To meet these situations, a new system has been set up, involving modification centers to which airplanes are delivered from factories for minor alterations and grooming before combat service.

• **Changes Are Frequent**—This new system is proving of the utmost importance. Constant nightmares of aircraft manufacturers—and eternal enemy of quantity production—have been incessant "E.O.'s" or engineering orders, innocent little documents which may mean anything from relocation of an instrument to some design change so fundamental that it necessitates tearing up whole sections of a production line.

Such continuous changes have been particularly tough on converted automobile manufacturers whose entire background has been based on firmly frozen models; more than one has been rudely shocked by the first E.O. But everyone now is agreed that combat experience must be embodied in design—and as quickly as possible. (The Nazis are suffering in the air right now because certain of their designs were frozen several years ago to enable them to produce the largest possible number of planes.)

• **Time and Space Saved**—By adopting the system of modification centers, war production experts figure to reduce to a minimum the number of changes that have to be made in the manufacturing



Double rows of guayule are combined to facilitate sheaving and baling. Nine hours after shrubs enter the crusher, blocks of pure rubber will emerge from the new processing plant which is just beginning operations in California.

plant. Thus the plane maker is free to turn out a reasonably basic model.

If a finished plane lacks an instrument or some other item of "G.F.E.," (government furnished equipment), which is often the case these days, it doesn't clutter up the final assembly line or remain tethered for long periods at the manufacturer's airport.

• **Special Gear Installed**—Another job for modification centers, which are really post graduate assembly plants, is installation of the particular equipment required in the combat theater for which a given batch of airplanes is destined. If the planes are going to the Aleutians or Siberia they need deicers; bound for Africa they need various items of desert fighting equipment; to be flown across the Atlantic they require extra tanks and emergency equipment.

Changes often require several hundred operations on a large airplane. The changes are allowed to accumulate to the point where they can be resolved into major design alterations in the basic plane at the parent plant. Then, at the opportune moment, the major changes are made in the production line.

• **Many Women Used**—A large percentage of the workers in the modification plants are women—a ratio that varies according to local conditions and labor policies of the management. In many cases, it reaches or exceeds 50%.

Modification centers are operated by the manufacturers, or the Army as the occasion demands. Much of the work is performed in maintenance and servicing shops of the airlines, and many shops have been expanded several fold to accommodate the new jobs. In some instances, modification work represents as high as 80% of the output of these expanded maintenance centers.

• **Another Assembly Line**—Typical of those operated by manufacturers is the Consolidated Aircraft centers in Arizona. This one began operations in December, 1941, and moved to a larger site in April, 1942. To this base, all B-24 Liberators, manufactured at the home plants, are flown for finishing touches.

The building is a twin hangar constructed, like many of those at other modification centers, entirely of wood, and is one of the largest of this type. Three test crews are maintained and present payroll numbers more than 1,500. All the B-24 bombers are delivered to the Army Air Forces at the modification center.

• **Planes Transformed**—Other examples of modification work are the Martin B-26 medium bombers, which were transformed into torpedo planes operating with telling effects against the Japanese at Midway and in the Aleutians, and the North American B-25 bombers used by Gen. Jimmie Doolittle in his Tokio raid.

How Industry is fighting the Spy Menace



-with sturdy fence

Long before Pearl Harbor, thousands of plants had taken this precaution. Good fence is a strong outer defense against would-be intruders. It would frustrate their plans before they ever gained access to the plant.



-with guarded gates

The only safe way to handle plant traffic is to make everyone show credentials to guards. With guards at all gates you can keep a close check on all persons or materials entering or leaving the plant.



-with window guards

If anyone inside the plant has the idea of tossing tools or plans to a confederate outside — these window guards will stop him. And, of course, they prevent spies from using windows to break into the plant.

HOW complete is your plant protection? Is entrance blocked by strong, high fence? Are vulnerable spots in the plant enclosed? Are windows guarded with a strong, close mesh? If you need the materials for this protection, call on us. Demands are heavy and supplies are limited. But, if you

are making war goods and have proper priorities we can provide the fence you need. We'll help you plan your fencing and give you a free estimate.

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Interested in fencing: ☐ Industrial; ☐ School; ☐ Playground;
☐ Residence. Approximately.....feet.





He's carrying more loads, bigger loads . . . and carrying them farther. Doing a wonderful job, too, in spite of all handicaps.

You can help him. Not necessarily because you're philanthropic, but because it's to your own interests to lend a hand. It's only good business to help your railroad shipments go through undamaged . . . to prevent waste of materials, manpower, machinery, time and shipping facilities.

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CAPITAL MEAT

Horse meat, more popular as shortages tighten, made another bid last week—in Washington. How many horses are available for slaughter is unknown, but packers guess the supply really is insignificant.

Fats to the Front

Lend-lease and military needs will shorten further supplies of fats and oils for civilians and industry.

Washington has promised Moscow that Russian soldiers will get American fats and oils in 1943, including butter. Lend-lease commitments are not made public, but it is clear that Russia holds the key to the domestic fats and oils position for the duration. Shipments will be one of the most important contributions Washington will make to keep Stalin in the war.

• **Food Comes First**—For years, edible uses of fats and oils have exceeded industrial uses on a pound basis—in 1941 food took 6,800,000,000 lb., compared with 4,000,000,000 lb. for industrial uses. In 1942, estimated food use was about the same, but industrial use was clipped by 500,000,000 lb.

Faced with lend-lease commitments to England and Russia as well as Army requirements, the government will insist that food needs be met first. That's why basic jurisdiction over distribution of fats and oils was transferred from WPB's Chemicals Division to the Agriculture Dept.'s Food Distribution Administration.

• **Dividing the Supply**—FDA will make the basic distribution of resources between food and nonfood uses; WPB will redivide the nonfood supply among industrial users; FDA will supervise the redivision of the edible supply. All this is being managed by Tom Daniels (of Archer-Daniels-Midland, big domestic

ats and oils company). He headed fats and oils for WPB and was transferred to FDA.

Use of edible fats and oils in virtually all nonfood products has been forbidden by WPB's basic fats-oils control order, M-71, which has been continued in effect by FDA. Human consumption of fats and oils will be closely watched and restricted.

• **From Nuts to Soap**—Fats and oils constitute one of the most complex factors in the economy of any nation. They run all the way from the butter or oleomargarine spread on bread to the palm oil used in making sheet steel. Basically, most fats and oils are alike; many are interchangeable; but enough have different characteristics to make trouble. For example, soaps can be made from many fats and oils, but high lauric acid content oils, such as coconut oil, make the preferred lathery soap (BW—May 23 '42, p45).

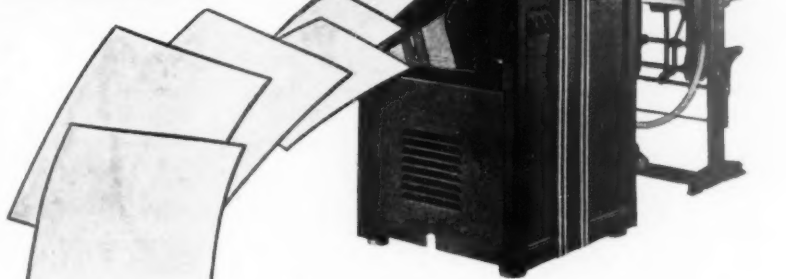
For several years, the Dept. of Agriculture has been pushing farmers for ever-increasing fat and oil crop goals. The 1942 soybean goal was 9,000,000 acres, but farmers actually reported planting 10,900,000. The 1943 goal for peanuts is 132% of plantings reported in 1942 (BW—Jan. 30 '43, p87). Secretary of Agriculture Claude R. Wickard has included flaxseed, peanuts, and soybeans in the list of "special war crops" on which the newly formed Regional Agricultural Credit Corp. can make special emergency-production loans.

• **Inventories Are Down**—In the face of rising consumer incomes, there is no limit to the U. S. wartime demand for fats and oils. Regardless of how much farmers can produce, there is a still undefined ceiling on the domestic supply—a ceiling determined by (1) availability of crushing capacity to convert the farm raw material into raw oil, (2) limited refining, hydrogenating, and bleaching capacity for turning crude oil into raw material for edible products, and (3) tank cars for transportation of crude and refined oils.

Roughly speaking, domestic production totaled 8,800,000,000 lb. in 1940; 9,400,000,000 in 1941; 10,100,000,000 in 1942. Imports hit a high in 1941—which was a "stocking-up" year—of 1,900,000,000 lb. but dropped to 900,000,000 in 1942. Year-end inventories also have been going downward: 2,500,000,000 lb. in 1940; 2,200,000,000 in 1941; 2,000,000,000 in 1942.

• **Imports Will Drop**—Optimistic estimates for 1943 domestic production are put at 11,700,000,000 lb., but imports will be even lower than the 1942 total of 900,000,000. While direct military and lend-lease purchases in 1940 and 1941 were negligible, they hit stride in 1942 when lend-lease alone took 1,000,000,000 lb.

The over-all situation in fats and oils, as seen by government specialists, sums



IT'S COMING...and soon, we hope...the day of Victory. It will be a day, too, when we Americans can put aside the building of tanks and guns and bullets to jump into the next big job ahead... the job of building for a peacetime world. And it's none too early to start planning... now.

In this new chapter of American history the Davidson is going to play an important part. Hundreds of industries, institutions, and Government departments have already experienced its exceptional efficiency in the production of office forms, form letters, advertising folders, stationery, envelopes, and many other items. They're getting a new high in quality at a new low in cost.

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GENERAL ELECTRIC SALUTES

**Our hats are off to this army
of lighting men who are helping
to save millions of man-hours
in war factories**

● This is the story of an army you probably never heard of. A small army... as armies are measured today. But a very potent one if judged by performance. Already this group of 3199 men is credited with the saving of 28,700,000 man-hours in America's war production! Through their counsel to factory and shop owners throughout America they have uncovered and corrected countless bottlenecks in production. Their weapon in this war is their knowledge of *lighting* as it affects production... spoilage... accidents.

These 3199 lighting counsellors have been recruited from the staffs

of Electric Service Companies, Electrical Jobbers and Contractors, and manufacturers of Lighting Equipment... as well as from General Electric's own staff. Every one of them has signed the pledge shown at right. All of them have one common goal... to help win the war by increasing and speeding war production.

THREE ENEMIES THEY ARE FIGHTING

Countless surveys of war factories have revealed the fact that *Glare*, *Shadows*, and *Gloom* are the three lighting faults that have the most



PORTRAIT OF AN ARMY. This composite photograph is made by merging the photos of many members of the Bomber Building Army.

to do with slowing down production... and that these enemies get in their deadliest work on the night shift. These men are trained to look for glare, shadows, or gloom, and to correct these troubles with the least possible use of critical materials.

Why I joined this "Army"

THE TRUE STORY OF A LIGHTING ENGINEER IN A MID-WESTERN CITY

I joined the "Bomber Builders" because I knew from my own experience how proper lighting can speed production. I had seen tangible evidence of this again and again in war factories and shops... where production has gone up from 3 percent to as much as 25 percent after lighting faults were corrected.

And I am giving all of my time to this job because I know of no other way in which *one man* can affect the war production of so many workers.

Perhaps the most encouraging part of my work is the fact that simple inexpensive changes in lighting can so

often make a big difference to the workers. Here are just three examples that show what I mean.

1. In a metal-working plant I noticed a man operating a huge planer. There was a shadow right over the cutting tool. When he leaned over, trying to see, the shadow of his own head made matters worse. Merely moving *one* lighting fixture cured that trouble!

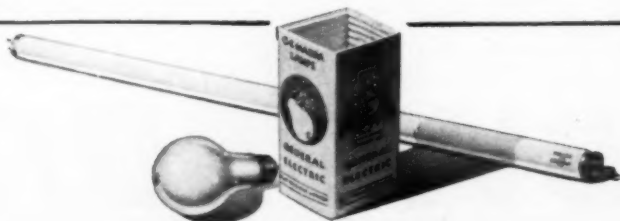


2. In one department of a big war factory the light was so dim that production was suffering. When I

investigated, I found a heavy accumulation of dust and grease on the fluorescent lamps and reflectors. Soap and water more than *tripled* the light in that room.



3. Glare in the eyes of inspectors was causing a bottle-neck in another war plant. I found that the light, though adequate, was wrongly placed. All that was needed was to change the position of the lighting fixtures above that inspection table.



G-E MAZDA LAMPS

3199 "BOMBER BUILDERS"

Why They Call Themselves "Bomber Builders"

This army of lighting men is united by a pledge, which every member must sign before he receives the Silver Bomber badge for his coat lapel. The objective of every member is to build at least one "Bomber"...which means that he must, by his own efforts, be responsible for helping to save 100,000 man-hours in war factories. That's a lot of man-hours, but when you step up production of a whole factory even as little as 3 per cent it doesn't take long to roll up tremendous savings of time.



Each Bomber Builder receives a Silver Bomber Button when he joins the "army" and signs the pledge. Right—Gold Bomber pin, which is awarded when he has helped to save 100,000 man-hours annually in American war production.

273 "BOMBER BUILDERS" ACHIEVE GOAL

As this magazine goes to press, we are able to report that 273 members of this "Bomber Building" army have received Gold Bomber Pins, signifying that they have built their first four motor "Bomber". Which means, in each case that 100,000 man-hours have been saved somewhere in America's war industry! And by conservative estimates, the entire army of 3199 can now be credited with the saving of 28,700,000 man-hours, enough to build 287 of these "Bombers".



IF YOU ARE RUNNING A WAR PLANT OR SHOP...PLEASE NOTE

If you have not had your lighting checked over lately by a lighting man, you may be overlooking a chance to speed your production—decrease spoilage—lessen accidents.

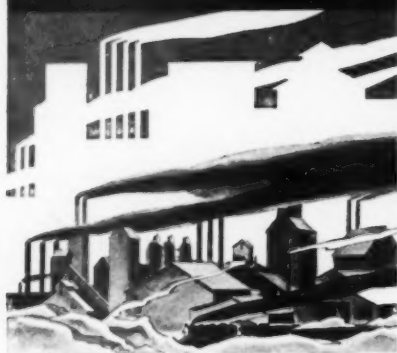
There is no charge or obligation for the service these men render. Their job is not to *Sell*, but to *Serve*. And they are pledged to get results with the least possible use of critical materials, and the least possible expense to the factory owner. So, if one of the

"Bomber Builders" calls on you, we hope that you will welcome him.

His job is to help win the war by helping you and other war manufacturers turn out more vital materials with your present facilities and man power. Phone your nearest General Electric lamp office, see your local electric service company, your lamp supplier, or write General Electric Company, Nela Park, Cleveland, Ohio.

GENERAL ELECTRIC

Planning Post War Plant Expansion?



Investigate the Resources and Industrial Advantages of WEST VIRGINIA!

West Virginia is playing a big part today in industry's after-the-war plans for expansion! Rich natural resources and convenient location recommend it as the "State of Industrial Opportunity." Here are excellent plant sites, efficient transportation, skilled and unskilled native-born labor, a healthful climate the year 'round. Write on your business letterhead for complete information about West Virginia—or for specific data about any particular localities that interest you.

NATURAL RESOURCES



Bituminous coal, silica, gas, petroleum, water power and hardwood timber are all available here for wide industrial use and development.

TRANSPORTATION



West Virginia's network of rails, highways, and rivers permits overnight shipments to Eastern, Northern, Southern and Midwestern markets.

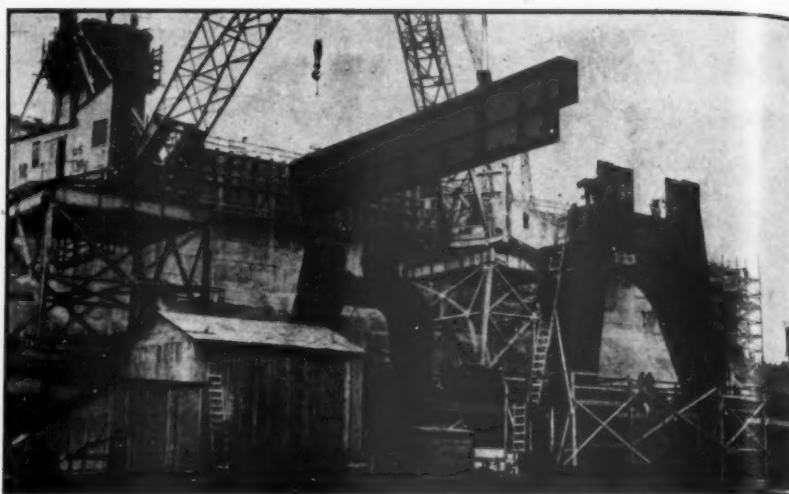
RECREATION



West Virginia's State Parks and Forests are convenient centers for wholesome, invigorating recreation—relaxation that revives tired minds and bodies.

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Box 7, Capitol Building
Charleston, West Virginia

Coal and Chemical Center of the Nation



WAR WORK FOR WATER

Work is speeded at the upper end of the Tennessee Valley Administration's system to supply much needed electric power for vital war industries, notably aluminum, in the area. At

the Douglas Dam on French Broad River (upper), powerhouse machinery is installed as that phase of the project nears completion. Fort Loudoun Dam on the Tennessee River prepares to store water—a 15,000-acre reservoir extending 55 miles upstream.



up as follows: There will be a tight squeeze by the end of 1943. However, the U.S. can squeeze through if the government will exercise careful controls and if the users keep their heads.

• **Quotas and Reserves**—Because of interchangeability and the literally millions of uses to which fats and oils are put, government control will always be along the lines of M-71. This order set up quotas based on average 1940-41 use, governing major food and industrial uses. For example, only 70% of base period use of fats and oils can go into the manufacture of paints, varnishes, lacquers, linoleum, oilcloth, and oil or oleo-resinous coated fabrics, while 90% of base period use can go into printing and other processing inks.

To supplement this basic control, Wickard has issued a new type of order

that will be used to build up reserves of special kinds of fats and oils. Effective Feb. 5, refiners must put aside 25% of their peanut oil production. This reserve for essential war uses—estimated at 10,000,000 lb. of a 40,000,000-lb. production anticipated—will be bought by the Commodity Credit Corp. and held for later redistribution.

• **Here's the Picture**—Following is the general outlook for the major uses of fats and oils in order of their volume. (Lard and soap always vie with each other as to which heads the list):

Lard—Averaging 2 lb. less per head than a year ago, 1943's record production of hogs is expected to yield 3,000,000,000 lb. of lard. Out of this must come ever-increasing British, Russian, and Latin-American requirements. Of the 1,000,000,000-lb. lend-lease fats and



Precious as Time Itself--

War Plants say: "Tell others what POR-OS-WAY has done for us. We're all in this together." Here are two of many reports:



WAR PLANT A—
Job: Internal wet grinding on Bryant 16-A machine at 8946 R.P.M. on hardened tool steel—SAE 4150. Precision grinding.

Results: Obtained 400% better production than previous wheel. Cut fast, free, and cool. Diamond-dressed only occasionally to retain shape.

WAR PLANT B—
Job: Grinding chrome molybdenum tubing on Heald machine.



Results: Completely eliminated tube warpage due to heat generation of previous wheels. Cut faster, required no dressing. Por-os-way finished 6 tubes against 3 for previous wheel.

JUST ONE YEAR AGO we presented to you for the first time a new precision grinding wheel. We said this new wheel, called Por-os-way, would up production 2 to 5 times per man per machine. It was a startling claim.

Thousands of war jobs have proved that we were conservative. Briefly, here are the reasons why: Por-os-way differs from all other wheels in structure. Made by a patented process, Por-os-way is honey-combed with millions of air cells that cool each tiny grinding point between contacts. Por-os-way's cool action practically eliminates "burns" that often ruin vital war work and discourage inexperienced hands. Por-os-way removes material with fewer passes, permitting a man (or woman) and machine to do the

work of 2 to 5 men (or women) and machines. Por-os-way is free cutting, resists "loading" and "glazing", and holds its "corners", therefore, Por-os-way requires less dressing and lasts longer.

Por-os-way hasn't begun to be used to its fullest advantage. Operators, accustomed to regular wheels, have been skeptical about pushing Por-os-way to the limit. Don't make this mistake!

By all that is patriotic and economic, don't hold back on Por-os-way. Give it "the works." Your doubts will soon turn to the conviction that Por-os-way does more and better work in less time and at lower costs. If you are responsible for better, faster, precision grinding—write for the booklet that tells the whole story of the Por-os-way wheel. Or have the right man do so—today!

THE WHEEL THAT COSTS THE MOST AT FIRST—COSTS THE LEAST AT LAST.

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a new **RADIAC®** PRODUCT

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MORE *WAR* PRODUCTION
PER MAN PER MACHINE

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PHOENIXVILLE, PA.
Western Gateway to
VALLEY FORGE



"I'M SPEAKING FOR JOE...
he can't come to work
... HE'S GOT A BAD COLD!"



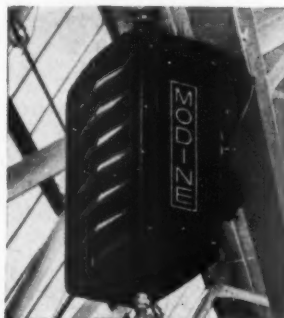
modine

UNIT HEATERS are helping to insure
man-power against colds and accidents

Scratch Joe out of the war production picture for a couple of days... probably a week, perhaps longer—"he has a cold."

The average loss of time from work, due to non-occupational illness, like colds, alone amounts to 64 hours a year for every man and 96 hours for every woman worker. On the 40-hour week basis industry loses two weeks a year per worker.

What's the remedy? One offered at the recent annual meeting of the Industrial Hygiene Foundation was—good physical working conditions in the plant.



Modine Steel Unit Heater

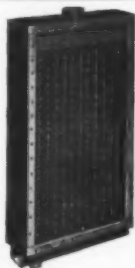
You can do exactly that with Modine Unit Heaters. Modines diffuse the warm air evenly over floors and working zones—automatically maintaining even temperatures by thermostatic control. There's no underheating...no overheating. Modines not only keep workers comfortable, Modines help to keep them healthy. And when they feel better, they work better.

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Modine Blast Heater

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MODINE MANUFACTURING COMPANY, 1740 RACINE ST., RACINE, WIS.

oils purchasing done in 1942, lard accounted for 654,000,000 lb. Nine percent of the total U.S. lard production for the first half of 1943 will go to Russia.

Soap—Trade association reports give 1942 the largest dollar sales on record—over \$364,000,000, or 11.7% above 1941, and 40.5% over 1940. Poundage was up more than 6.6% over '41, and 10.7% over '40. M-71 has cut the use of fats and oils to 84% of the base period, except that 150% quotas are provided on the use of foods made from domestic vegetable oils or their fatty acids. However, the latter are not much practical help to the bulk of the soap business. Until now, the need for the glycerine byproduct has been the reason for capacity soap production. Government men threaten to make further cuts in civilian glycerine use, thus eliminating the need for sky-limit soap output.

Butter—Rationing is inevitable. This year's per capita civilian supply will average 13 lb.—three under 1940 and 1941. Cuts already have been imposed on last fall's Army per capita average of 29.2 lb. and the Navy's 36.5 lb. Total 1942 production is estimated at 2,150,000,000 lb. from all sources. In 1942, the Army bought 100,000,000 lb.; lend-lease sent 17,000,000 lb. to Russia, a small part of the 250,000,000 lb. total of fats and oils sent to the Soviet.

Shortenings—On a quota of 88% of the 1940-41 base, shortening will be squeezed between the short lard position and rising demand. Although fats-oils men believe that a fat is a fat no matter what product it is used in, nutritionists are pushing for a guaranteed supply of shortening for bread—perhaps at the expense of cakes and other uses.

Protective Coatings—As the major industrial use of fats and oils, civilian supplies will be drastically cut by the 70% of 1940-41 quota and the large military need for paints. WPB is pushing paint men to conserve drying oils and to experiment with substitutes. The use of "bodied" oils, which have a lower gloss and poorer brushing quality than the drying oils normally used, is being urged.

Margarine—Born of necessity in the Franco-Prussian War, margarine now is booming. Production should hit 620,000,000 lb. this year (BW—Jan. 16'43, p20).

• **Price Rise Checked**—One of the first major groups of commodities to taste price control, prices of fats and oils have not risen as rapidly as during the last war. This is regarded as some achievement in view of the stronger demand and the greater restriction on imports. Prices of domestics advanced 27% during 1942 as compared with 36% in 1917. Prices of imported oils were held practically unchanged in 1942.

Washday Blues

Slash in fuel oil quota squeezes linen supply houses, already hit by price ceilings during their big boom.

Linen supply houses, through the Linen Supply Assn. of America, are putting up a vigorous fight for exemption under Amendment No. 29 to OPA's Ration Order No. 11, which reduces their supply of fuel oil 40% in the east.

• **Hot Water Also Cut**—Limitation of hot water for washtubs, says Hugh P. Flynn, president of the association, cuts operations by that same amount, at a time when fresh linen is a necessity for sanitation in war plants, hospitals, cafes, and other places.

Supplying linen is big business. Industry revenue in 1942 ran around \$120,000,000, up 20% from 1941, to set an all-time record. The supply houses, of which there are 1,500 units (companies or branches) in the country, obviously have large stakes in the ration pool.

• **Triple Stocks**—Supply houses stock an average of triple their weekly in-service linens. An office washstand serviced with six towels weekly will be backed up by another six in the laundry. A barber shop's aprons or barber coats are backed up not only by equivalent amounts in the laundry, but also by, perhaps, even more in transit to or from the shop.

In 1942 and up to today, business for these supplier-laundries has boomed because of the war. Service to arms plants

is brand-new business. Women's entry into all types of manufacturing plants means new sanitary facilities—linen towels instead of paper ones in washrooms, supplying of uniforms for the first time in many places.

• **Prices Regulated**—This increased volume did not jump profits proportionately. Prices are regulated by OPA schedules governing the service industries, putting them back on a March, 1942, sales basis despite higher operating costs. Too, there is no diminishing cost of production. Every added piece of linen requires proportionately increased supplies and washing service.

The outlook for 1943 was for lower volume, even before fuel oil rationing developed, because of shortages of textiles and laundry machinery.

Machinery shortages, incidentally, are paving the way for a number of mergers. As machinery begins to falter under the load, some linen supply houses have found it advantageous to combine operations. More centralization in the industry, therefore, appears to be ahead.

• **War Plants First**—But machinery problems are minor, say the supply houses, alongside the headache of cutting fuel oil and hot water. Actually, it is pointed out, the effect on many business concerns may be much more severe than 40%. For much linen supply business today is with war plants and other war establishments. These must be served. If half a linen-supply laundry's business is for war work, the 40% cut will affect almost entirely the other half, all but washing it out.

The barber's coat and apron: and the waitress's smock will be worn longer, won't be as clean. Whether that argument will prevail with OPA remains to be seen.

Big Movie Year

Attendance and receipts push to new records, and, even if there are wartime troubles, there are compensations.

After Winston Churchill and President Roosevelt concluded the White House conference which laid the foundation for the invasion of North Africa, they adjourned to a motion picture. Sergeant Shrapnel relaxes at the Army camp movie following a hard day's practice at scientific slaughter. Back home, civilians with plenty of money and few things to spend it on flock to the picture theaters.

• **Receipts Were High**—Altogether war factors made 1942 a superstupendous-colossal year. Estimates for 1942 attendance run as high as 100,000,000 for the weekly average—which would be

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AMERICAN WRITING
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TABLE STAKES

Driving restrictions have put a nasty crimp in the parking business, but Harry Ducote figures his lot in downtown New Orleans will at least feed him. Eight months ago, he put in a vegetable garden around the edges. It's still producing.



A LESSON FROM MARS

When Mars invented his foot-powered, auto-watered grindstone he took one of the World's first steps in technology.

Like Mars we must have technological improvements to win the war. Electronics, with its new, secret uses is the nerve center of our armed forces. It will lead to even greater achievements during peacetimes.

War has witnessed marvelous developments in dehydrated foods, in synthetic rubber, in prefabrication, in plastics . . . all of which will influence future standards of living the World over.

...

Just as Management Engineering is helping win the war, it will help win the peace.

When the present war broke out, every one of our clients was faced with war contracts . . . problems involving conversion for maximum production in minimum time with existing facilities and without undue expense. Because of experience gained on the fighting fronts, reconversion has been necessary for many of these clients in order to meet improvements in armament and the shifting to new types. It has been our job to help with all of these problems.

It is our hope that we will soon be called upon to reconvert to peacetime production.

Geo. P. Trundle Jr.
President

THE TRUNDLE ENGINEERING COMPANY

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10,000,000 better than the previous record of 1930. Since exhibitors have been inching up ticket prices, receipts probably made a better showing than attendance. The 1942 box office take was around \$1,300,000,000, or \$200,000,000 more than 1941.

At the same time restrictions on materials, fancy salaries, increased taxes, and military requisitions of manpower have brought picture executives plenty of headaches. But some of these may turn into benefits; the double feature is an example. Showing of two long pictures (of which at least one was sure to be a turkey) became general during the worst of the depression when theaters were frantically competing for the reluctant dollar. This developed into an effective weapon of the smaller, independent theater against its gold-crusted chain rival. About half the nation's seating capacity (of 17,500 theaters) is in double-feature houses.

• **Double Bills Hit**—Some companies would like to get rid of double-features. This section of the industry cheered recently when Lowell Mellett, motion picture chief of the Office of War Information, attacked them in a New York speech. Return to single features not only would save much needed material but also would increase the time available in theaters for vital war information and salutary propaganda, Mellett pointed out.

Though the picture industry is sure it will be preserved for the transmission of propaganda, its more fantastic frills are being snipped off. Beginning Jan. 1, Hollywood's six-figure salaries, like others, were cut down to the \$25,000 (net) level (BW—Nov.14'42,p92). The movie magnates protest that they can get along without their swimming pools and Moorish palaces if other patriots can, but they are worried about their heavy California income taxes, a contingency not provided for in the \$25,000 ceiling. Trouble also is expected in adjustment of actors' contracts running heavily to bonuses, increases, and options.

Many other war orders have been successfully absorbed by Hollywood studios. Some 3,000 technicians have gone into fighting service since Pearl Harbor. Women are being trained to handle sound effects, lighting, scene shifting, and many other operations. Studio staffs are working at high pressure to keep up with pictures being rushed through before top-drawer stars, a valuable asset of the companies, are enlisted for live parts in the global tragedy. One device is the wholesale exchange of available technicians and stars among producing companies.

• **Many Subterfuges**—A ceiling of \$5,000 for the cost of a set for a picture (BW—Jul.25'42,p38) is deplored by fans with hankerings for De Millian grandeurs, but it has put a premium on performance,

SERVING THE ARMED FORCES

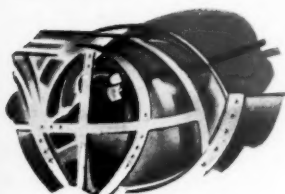


"... This award is your nation's tribute to your patriotism and to your great work in backing up our soldiers on the fighting front."

Herbert P. Pratt

Under Secretary of War

EMERSON-ELECTRIC War Products



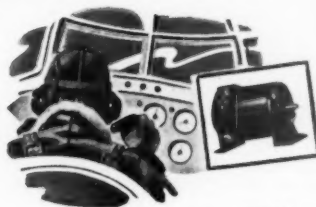
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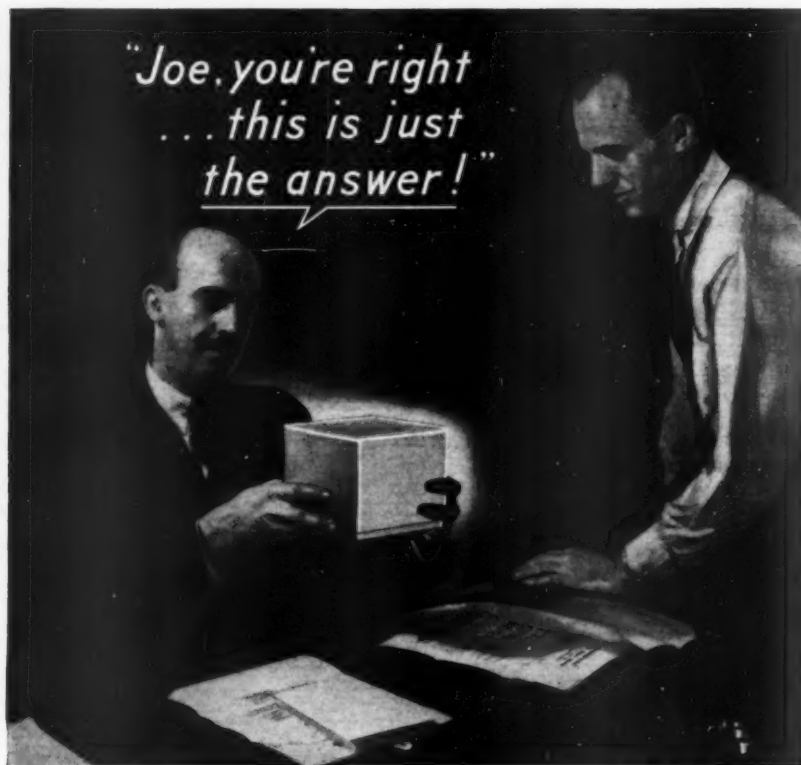
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OF THE SET-UP PAPER BOX INDUSTRY

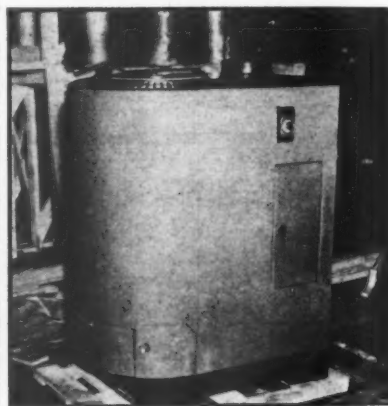
and producers solemnly insist that it makes for better pictures. It also makes for more miniatures, the trick by which a small pool becomes the setting for a naval battle and a doll town assumes the glories of Babylon.

Scarcity of building materials has driven the studios to mining the storage lots in which their old sets are kept. Operations yield valuable recoveries of lumber, nails, and hardware. Much ingenuity is used in substituting plywood, plaster, and paint for critical metals.

• **Drawbacks of Out of Doors**—At first it was planned to make greater use of outdoor locations, thereby employing California's famous scenery to cover the shortage of manufactured sets. But movie passenger cars are no better than private cars on tire rationing, and movie trucks are under the Office of Defense Transportation, which has ordered a 25% cut in mileage. Application of national gasoline rationing has further constricted this avenue of escape.

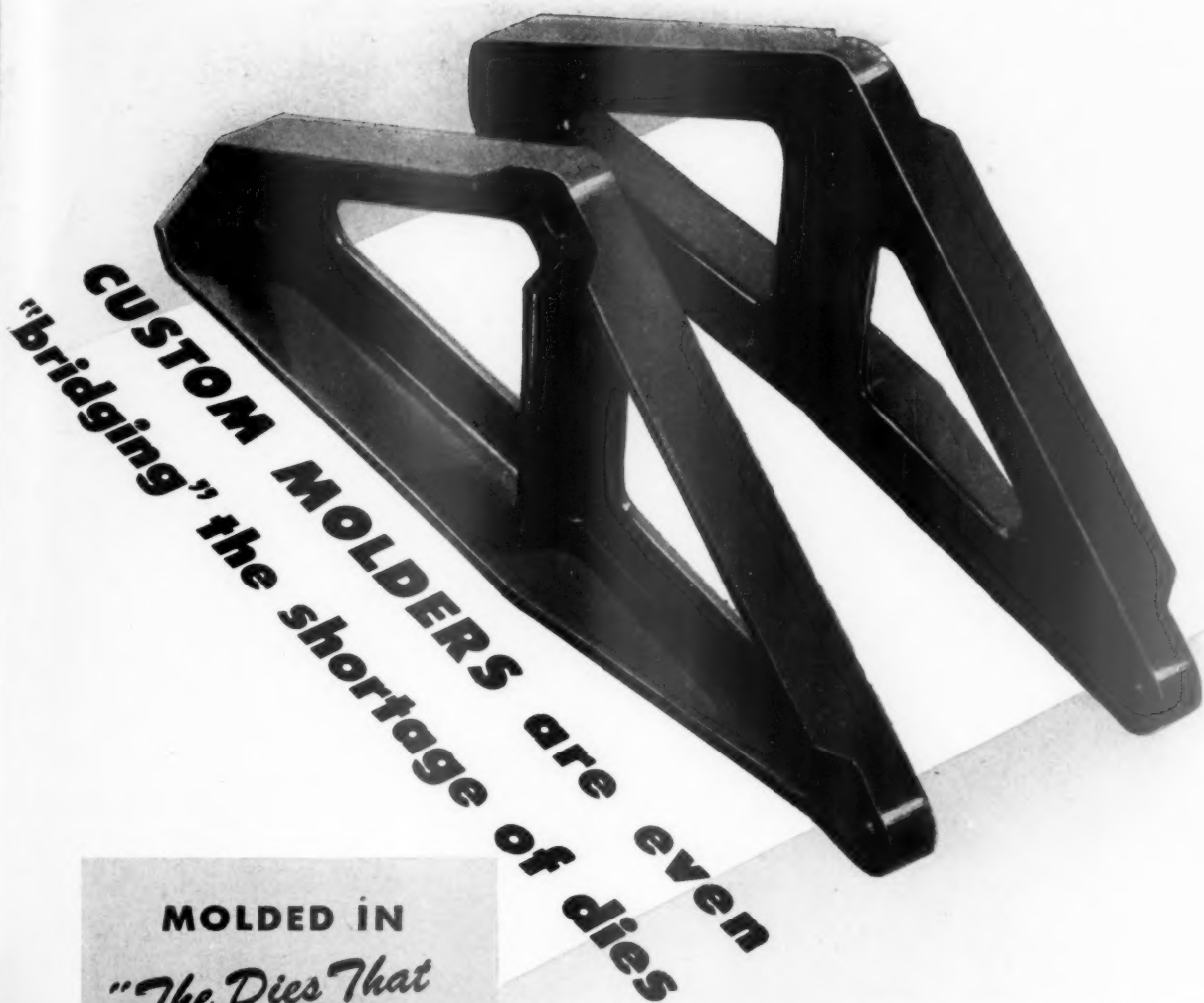
WPB has asked the movie industry to cut its film use to three-fourths of 1941 footage. Films are made from one of the prime ingredients of gunpowder, using about half the peacetime production of basic nitrocellulose. It is figured that film stocks, plus economies, will get the picture companies by. Wasteful shooting of film on the lot and wasteful cutting when the production is finished is being eliminated. Producers also are shortening screen "credits," the listings on final prints of everybody connected with the picture.

• **Propaganda Shorts**—The industry would like to help the government econ-



NO SMOKING

Burning soft coal without smoke is the feature of stoves rolling from assembly lines of the Knox Stove Co., Knoxville, on government order. The trick is accomplished by placing the clay-lined firebox between the automatic coal hopper and the stovepipe, requiring volatile materials that cause smoke to pass through the flame to be consumed.



MOLDED IN

*"The Dies That
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As an example of the ingenuity of custom molders, the dies in which these plastic parts were molded were used formerly for metal castings.

If you are converting from metal to plastics for one or more of the parts you require, we, or the custom molder, may be able to show how, with certain changes, the old

grows, the importance of the work of custom molders grows with it. If you need a part or a complete product, it probably can be molded from plastics by injection, compression, extrusion or transfer. Here's how to go about finding out:

1. Tell us what qualities you want in the finished part—impact strength;

resistance to solvents, acids, water; light transmission; dielectric strength; etc. We select the plastic to give desired results.

2. We put you in touch with the available custom molders equipped to mold the piece.

3. The custom molder gives you a quotation.

4. We work with the custom molder in furnishing the formulation of the selected Lumarith plastic that suits all factors of the production technique.

Your inquiries are invited.

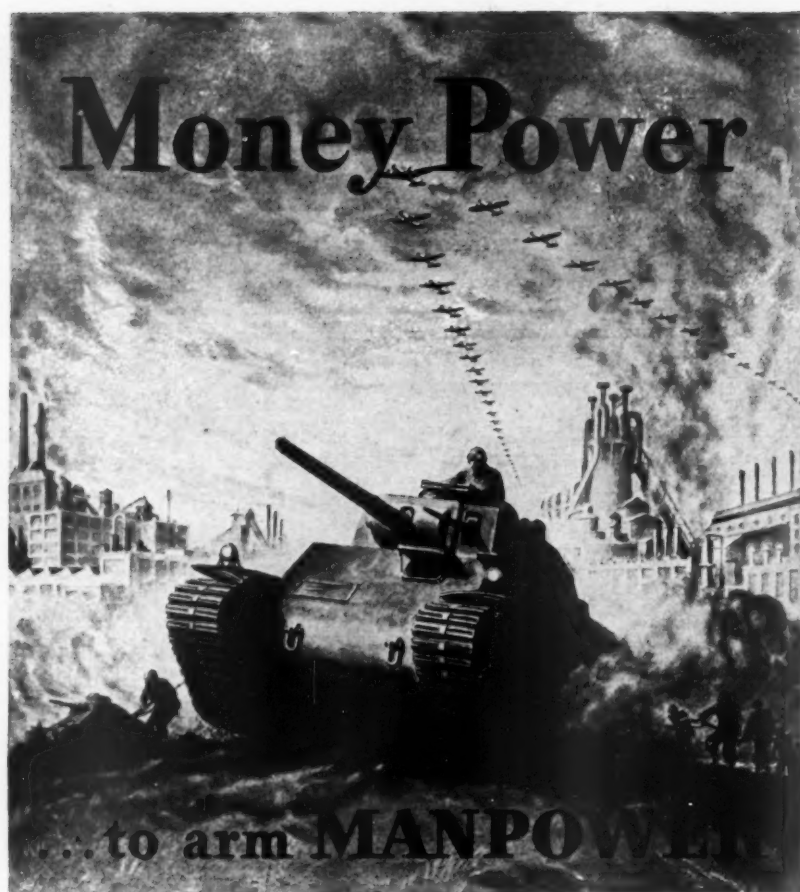
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A Financing Plan for War-Time Industries

Back of the fighters are the factories.

Behind the front lines, there's the battle of the assembly lines, a battle that must be won before our combat forces can do their job.

Money is the ammunition needed here.

To maintain the larger inventories, hold to higher production schedules, meet the higher payrolls and pay the higher taxes, more working capital is, in most cases, an absolute necessity.

If financing is one of your problems, Commercial Credit service is the solution to it.

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CAPITAL AND SURPLUS MORE THAN \$65,000,000

omize on propaganda shorts. Some of these are made by the industry itself and some are produced under government supervision. Different Washington agencies are swamping the industry with requests for pictures, and in most cases the official has bright direction ideas that he wants incorporated. Some of the results have been gosh-awful.

Thus OPA demanded four pictures to educate the public on the oil crisis. Hollywood pointed out that one picture would be enough to dramatize the subject. OPA said all right but wanted a 20-minute film. "Too long," retorted Hollywood. Finally one four-minute short was made, and it was long enough to put over the message.

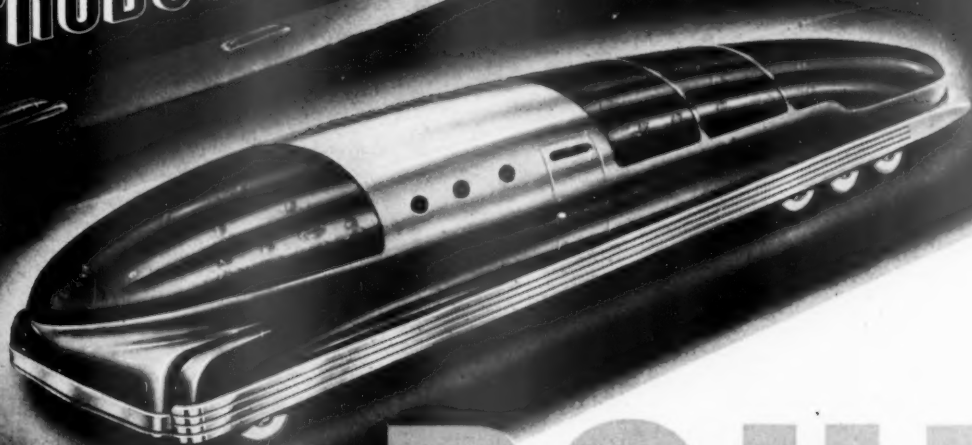
• **Happy over Bond Drive**—This cooperation has a basis in mutual favors. Washington was more than satisfied when the September War Bond drive of the industry, staged by the most expensive talent in the business, exceeded by \$63,250,000 its \$775,000,000 goal. Since then Will Hays, czar of the industry, with the help of the U. S. State Department obtained for the producers \$42,500,000 frozen in Great Britain from the beginning of the war. This agreement not only thawed a nice piece of money due from American pictures but also provided terms for future transfers. Altogether it was a highly agreeable stroke since the British Isles now provide 46% of the foreign market for our films.

Movie people point with pride to the fact that one of the first things the Axis does when it overruns a country is to abolish American films and, similarly, that one of the first things our side does on occupying a country is to restore them.

• **Entertaining the Troops**—In addition to propaganda pictures for civilians, both here and abroad, the industry has specific commitments for the fighting men. For an average of 14¢, the soldier, sailor, or marine in camp can see a feature picture that costs the Broadwayite many times as much. These are provided on a rental basis to the Army and Navy. In addition, producing companies have donated 1,400 prints of 80 new full length feature pictures which are shown free on Navy vessels and transports at sea, on improvised screens in jungle stations, and at other points to men on battle duty who can't get to theaters. Training films for various military services are provided by the industry at cost.

On the home front more than 51 propaganda shorts (the Donald Duck War Bond film was one) have been given to the government or furnished at nominal charge. The industry distributes these to 16,000 theaters. Movie fans have noted the increase in this type of film, which the theater owner is doubly happy to show. He is helping a patriotic effort, and he is reducing his outlay for rentals since he gets such films free.

POST-WAR
PRODUCTS



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THE WAR—AND BUSINESS ABROAD

Battle Now Is One of Supply

With a jittery Mussolini shaking up his cabinet and Finland wavering, feeding of civilian populations takes its place right beside the provisioning of Allied invasion forces.

Rapidly and dramatically the stage is being set for the battles that are expected to determine the outcome of the war in Europe.

Conditions Change Radically

Mussolini has ousted his cabinet and is girding himself for a last desperate stand against United Nations forces which threaten soon to engulf him from across the narrow strait between Tunis and Sicily.

Though reputedly there are still five German divisions scattered along the Russian-Finnish front, Finland is talking openly about a separate peace with Britain and Russia, and President Roosevelt has just concluded long conferences with our Ambassador at Helsinki who now is to return to his post.

Following Churchill's Adana conference with Turkish officials, the Soviet Ambassador has ostentatiously entered into close social and political relations with topflight government authorities in Ankara.

And, finally, Spain and Portugal are again in the picture, with, on one side, rumors that Churchill and Franco have met, and, on the other, that Berlin is threatening to occupy Spain's Atlantic ports.

Conditions have changed radically since the time, barely a year ago, when Singapore surrendered unconditionally to the Japanese, and the vast, rich Netherlands East Indies prepared for their last defensive stand—which lasted barely a month. A few months later, the victorious Japanese were bombing northern Australia from former Dutch and Portuguese islands less than 600 miles away, and the last British bases in Burma—as well as China's "Lifeline"—were being pounded out of action by the onrushing Nipponese.

That tide of Axis victory carried the Nazis to Stalingrad and the outer fringes of the rich Caucasus oil fields and the Japanese to the borders of India, and by the summer of 1942 threatened to make a juncture through the Middle East and the Indian Ocean (BW—Mar. 14 '42, p. 34). But the Nazi disaster at Stalingrad and the retreat, which threatens now to sweep beyond Rostov and Kharkov, together with the Anglo-American drives that have bounced the Axis from all but a toehold on Africa,

have almost completely altered the picture in Europe. And the Solomons victories of the United Nations have been able to hold Japan within the boundaries of its conquests of a year ago.

There is a persistent rumor that the Casablanca conference was precipitated by an impatient Stalin who—watching his casualties approach 4,000,000 and his reserves of military equipment dwindle while Britain and the United States still had not opened a major front on the west or succeeded in setting the stage for an early drive against Europe from the north coast of Africa—demanded some major action in the west in time to forestall another spring offensive by the Nazis.

Whether or not strategists are right when they claim that it will be May or June before the Nazis are driven out of Tunisia and the Mediterranean supply route to the Middle East is opened, it is plain that London and Washington are preparing for large-scale action in Europe, and that business is going to feel the effects immediately.

Shoe Rationing Implications

Behind the week's shoe rationing announcement is the realization that large supplies of footwear or leather must be on hand to rush into countries that the United Nations must occupy in their drive against Axis-held Europe.

Lend-Lease Administrator Stettinius revealed this week that 50,000 tons of food and other supplies have already been shipped to the civilians of French North Africa, and that 30,000 tons a month of supplies have been promised by the United States. Britain is pledged to send equal supplies each month.

When it is realized that fewer than 15,000,000 people live in French North Africa, compared with 40,000,000 in France, 42,000,000 in Italy, 8,000,000 in Belgium, and 7,000,000 in the Netherlands, the size of the supply task confronting the United States and Britain is evident.

Wheat, flour, canned meat, sugar, soap, seed potatoes, canned fish, powdered milk, and cheese were the main items provided in the first shipments to Africa, and shoes and cotton cloth are bulky items in the shipments now bound across the Atlantic.

Finland's negotiations for a separate



SLICING DAYS OFF SHIPBUILDING SCHEDULES...

UNTIL recently, cutting hatchway openings out of heavy deck plating was a bottleneck in the construction of certain types of ships. It was a slow, costly job requiring many laborious machining operations.

Could the oxyacetylene flame eliminate this bottleneck? This was the problem presented to Airco's research engineers by one of its customers. The problem was solved by an entirely new gas cutting machine, designed and constructed specifically to handle this job.

With this machine it is possible to cut beveled openings, rounded at the corners, out of thick steel plate—all in a single continuous operation! The finished cut is smooth and clean, and more important, the openings are cut in 1/120th

the time required by the former method. Today this machine—the Airco Polygraph—has become standard equipment in shipyards and many other war production plants throughout the country.

This development is typical of the achievements resulting from the teamwork of Airco engineers and its customers—each contributing their specialized knowledge towards one common objective.

Air Reduction's wartime policy is to help American industry do the tough job we all face. Our nationwide field engineering service and research facilities are at your disposal to supply "know how" information on any problem involving the use of the oxyacetylene flame and the electric arc.



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The Globe-Wernicke Co. . . CINCINNATI, O.



SAFETY SUIT

To boost morale and sidetrack spy scares, the U. S. Army Air Forces now permit General Electric Co.'s contract service men overseas to wear officers' uniforms without insignia of grade. Most are technical advisers on superchargers.

peace have tagged to them an appeal for food, which must be supplied by the United States since Russia is already reduced to iron rations and Britain can grow only 60% of its own food.

Business's Job

These civilian demands for food and clothing are insignificant compared with the huge shipments of food, arms, and munitions that are necessary to maintain an armed offensive in Africa and Europe. Fewer than 2,000,000 men are overseas now, and yet the Africa campaign has slowed down due as much to the supply shortage as to the transport problem caused by rain and mud. Last year's threat of a German-Japanese juncture in the Middle East has been removed by the Russian victories in the Caucasus and the prospect that the supply route through the Mediterranean will be cleared.

Iran oil can move through the protected waters of the Persian Gulf and the Red Sea to new bases along Africa's north coast. Some food and clothing can come from India and South Africa along coasts now fully patrolled by United Nations airplanes.

But the tanks, guns, and munitions must still come from arsenals in Britain and America, and so must a lot of the food specialties for both Army and civilians. That's the measure of the job confronting business as the stage is set for the decisive battles of 1943.



Rough Riders Charge Again!



Up other hills and in the face of fire-power undreamed of in '98, America's Rough Riders of 1943—those hard-bitten men of our motorcycle troops—are making swift and daring history in combat. Spearheading lightning thrusts into enemy-held territory, these hundred-mile-an-hour modern cavalymen charge over seemingly impassable obstacles of war-torn terrain. Their road is rough, but the power of their mounts is smooth.

MOTORCYCLES always were tough. Warcycles are even tougher. Every part must take bitter punishment and like it. Every link of a Baldwin-Duckworth roller chain belt which transmits the power from motor to rear wheel is a custodian of a soldier's safety and the fate of his mission. American motorcycle manu-

facturers who have the responsibility of giving the Army the best, choose Baldwin-Duckworth chain.

Just as these Baldwin-Duckworth roller chain belts absorb the shock loading which is imposed upon them in this service—so they operate to the advantage of America's mobilized industry. Chain belts are the only medium of power transmission that can absorb shock loading and maintain speed ratios and efficiency—and Baldwin-Duckworth roller chain belts are the result of unceasing development of that medium.

Baldwin-Duckworth produces many of the more than 2000 types and sizes of chain belt which are made by Chain Belt Company for the transmission of power, timing of operations and conveying of materials. Other Chain Belt divisions make machinery for the mixing and placing

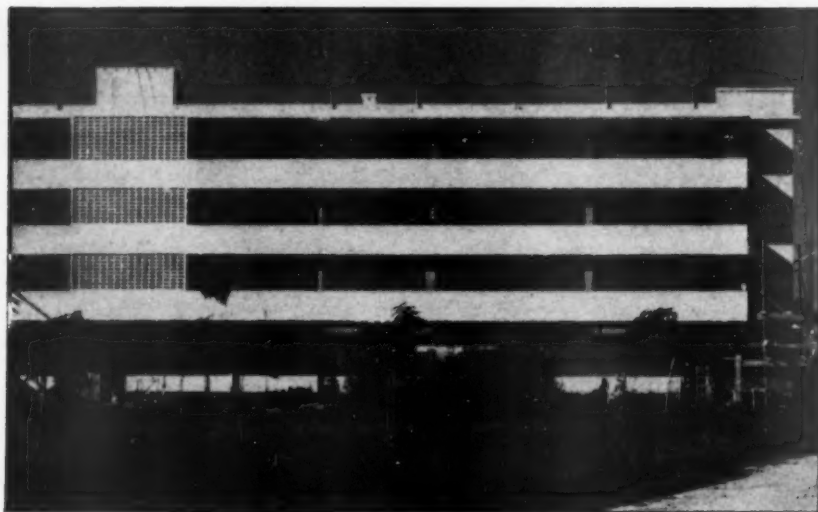
of concrete, centrifugal pumps for moving water and other liquids, pumps that pump concrete, and specialized engineering and sanitation equipment.

Like the other divisions of Chain Belt Company, Baldwin-Duckworth is devoting all its energy and ingenuity to shortening the time between now and V-day.



Baldwin-Duckworth Roller Chain Belt Division, Springfield and Worcester, Mass.; Rex Chain Belt and Transmission Division, Rex Conveying and Engineering Products Division, Rex Construction Machinery Division, Milwaukee, Wisconsin

CHAIN BELT CO.
OF MILWAUKEE



MODERN BRAZIL

Brazil's ultra-modern architecture has attracted so much interest among architects that a photographic display of outstanding buildings is now touring the United States. Three striking



examples are: a modern, low-cost apartment house for industrial workers near Rio de Janeiro (above); the recently completed Ministry of Health and Education (lower left); and (lower right) new headquarters of the Brazilian Press Association, in Rio.



Blacklist Impact

Mexican economy thrown out of gear by U. S. controls on enemy trade because alien owners still hold titles.

MEXICO CITY—More than 900 of the 11,000 foreign firms and individuals blacklisted by the United States government are in Mexico, and both their present and their future plights pose difficult problems. No one questioned the propriety or necessity of preventing American trade with firms likely to be dealing with or for the enemy, but this trade block is having widening effects upon the economies of nations in which they are located.

• **Aliens Kept Titles**—The Mexican cabinet met the problem of controlling alien interests by setting up an Interdepartmental Board Relative to Enemy Property which decides what assets should be seized and placed under control of the Board of Administration and Vigilance of Enemy Property. As in other countries, activities inimical to the interests of Mexico were halted immediately and steps taken to gear operations to the war economy, but ownership remained in alien hands.

Theoretically the problem should have been solved at this point, but the firms remained on the American blacklist, thus have been unable to obtain materials necessary to production.

• **National Economy Hit**—Axis properties, including most of the chemical industry making dyes, medicines, fertilizers, acids, etc., many hardware, ma-

chinery, photographic supplies and agricultural enterprises, are worth about \$180,000,000—an important segment of the Mexican economy. Curtailment of their operations and their threatened ruin have had a depressing effect upon Mexico's economy.

Under the direction of Luis Baera, BAVEP was vested with the authority to appoint trustees, employ and discharge workers, block profits except for maintenance allowances for alien owners and families, and to sell properties to Mexican interests.

• **Agriculture Less Affected**—Little difficulty has arisen in the management of agricultural properties since these are less affected by the blacklist. About 60 German coffee plantations in the Soconusco, Chiapas region, valued at about \$5,000,000, have been turned over to the National Bank of Exterior Commerce for management under a contract including the following provisions:

(1) One percent of the coffee sales go to the bank, plus 2% of the expenses in each account per harvest—a total of less than 8% annually.

(2) The bank is obligated to consult with BAVEP on conditions of sales.

(3) BAVEP can intervene and supervise the administration at any time.

(4) Between 300 and 1,200 pesos (\$60-\$250) a month, depending upon the size of the family, goes to the German owners for living expenses.

(5) A few German key technicians have been permitted to remain on the plantations in custody of the state's governor.

• **Complete Seizure Demanded**—On the industrial side, simple management of alien properties, without providing access to stocks to maintain nationally important production, has called forth the inevitable demand for expropriation. Deputy Carlos Samaniego, supported by other members of the Congress, has asked that these enemy properties be expropriated outright to guarantee indemnity for ship sinkings by Axis submarines. Seizure probably would have the result of eliminating firms from the American blacklist.

Best informed Mexican circles still believe that expropriation will not be ordered although they recognize the increasing temptation as more firms are forced to close down. Since the plight of the Mexican blocked nationals is closely paralleled in other Latin-American countries, business men are watching the trend closely—particularly since investments and potential markets are involved.

CHILE'S BENEFITS BEGIN

Barely a fortnight after breaking diplomatic relations with the Axis, Chile has begun to benefit economically.

Latest deal negotiated by Washington for the transfer of idle machinery to

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We're Helping to "Pass the Ammunition"

Producing shell casings on specially-developed machinery with the accumulated skill of many years of research and experience in the forming of metal used in the manufacture of Sylphon Bellows and other Sylphon Products—The Fulton Sylphon Company is especially qualified to help "pass the ammunition" to the boys we are so proud of on the firing line.

Likewise, our experience in the precision machining of accurate control instruments, valves and specialties, equipped us, naturally, to produce the fuzes and parts for depth bombs, mines and torpedoes that are flowing from our plant in ever-increasing quantities.

It is particularly fortunate for us and for our peacetime customers that we could utilize our natural talents and whet our engineering minds on these problems of war essentials, while helping to do our small part in winning the Victory.

For out of this experience will come many improvements in design and construction with telling effects upon the Sylphon Products that will be offered to Industry in the post-war world.



Sylphon Products include: *Aircraft Controls*—Engine Thermostats, Oil Cooler Thermostats, Fuel Pressure Regulating Valves; Parts for Super-charger Controls, Carburetor Controls, Fuel Injector Controls; *Marine Controls*—for the Regulation of Fresh Water Heaters, Fuel Oil Heaters, Lubricating Oil Temperatures, Diesel Engines, De-superheaters, Steam Jet Ejector Condensers; *Automotive Controls*—Engine Temperature Controls for Tanks and Other Military Vehicles, Trucks and Passenger Cars; *Refrigeration Controls*—Thermostat Mechanisms for Domestic and Commercial Refrigerators; *Industrial Controls*—Temperature, Pressure and Vacuum Controls for Industrial Processes; *Air Conditioning Controls*—for Buildings, Ships, Railroad Trains, Aircraft.

A reproduction of the above Lauren Smith illustration, suitable for framing, will be sent on request.



THE FULTON

KNOXVILLE

SYLPHON CO.

TENNESSEE

Temperature Controls... Bellows... Bellows Assemblies



25-FOOT FLAME EXTINGUISHED
IN ONE MINUTE

Within a few minutes, after this large oil pit fire started, flames were 15' to 25' high. After burning several minutes, one No. 30 duGas Extinguisher extinguished the fire in less than 1 minute.

THE MODERN WEAPON FOR FIRE FIGHTERS

Fire is tragic waste, especially in wartime. Big fires start with small ones, and light, mobile duGas equipment, within easy reach, cuts priceless time from the extinguishing period. At home and overseas, duGas is speeding victory over fire. Particularly effective on fires involving highly inflammable liquids and gases.



DuGas Compound is a dry powder blown by pressure over the burning areas. IT IS ALWAYS READY: Will not cake, harden, freeze, evaporate, spoil or deteriorate. Not affected by dampness.



DuGas is a non-conductor of electricity... can be used on electrical equipment without danger to operator or damage to equipment. No toxic fumes; no water damage.



Available in 15 and 30-lb. Hand Extinguishers; 150 and 350-lb. Wheeled Engines.

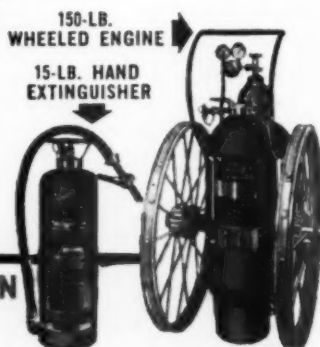
*Approved by Underwriters'
Laboratories and Factory
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Write for details and priority information

DUGAS ENGINEERING CORPORATION
MARINETTE, WISCONSIN

Owned and operated by Ansul Chemical Company

50 • The War—and Business Abroad



Latin-American countries (BW-Jan. 16 '43, p37) is with Chile which has just completed arrangements for purchase of used machinery to equip a small copper extrusion plant and a modest-sized steel mill.

Chile has large copper mines and normally sends large supplies of ore to the United States. Its iron ore deposits are less well known but large enough to have provided the Bethlehem Steel interests, which work them, with 1,000,000 tons a year.

CANADA

Pay Bonus Nipped

Ottawa's payment of new subsidy to retailers lowers cost-of-living index; pooling of paper mills' profits fought.

OTTAWA—Canada has halted a threatened price increase-wage bonus inflation spiral by paying part of consumer costs of pivotal foods out of Treasury funds and forcing retail prices back to the November level.

• **Cost of Living Dips**—This is the explanation of last week's rejoicing by Price Control Chief Donald Gordon and his aides at the announcement that the cost-of-living index was down 1.7 points as of Jan. 1. The drop wipes out an advance in the index to Dec. 1, which would have brought another automatic increase in the cost-of-living wage bonus had it stood at this level through another month.

The wage bonus, in operation since 1941 and designed to supplement frozen wage rates when living costs go up, is tied to the cost-of-living index (BW-Jul. 19'41, p14). Last bonus adjustment became effective in November. It was followed immediately by an accelerated rise in the index. Canada's wartime economic controllers feared the collapse of the whole anti-inflation structure unless the spiral was stopped.

• **Subsidy Remedy**—To save the situation, Ottawa made the bold move early in December of ordering a drop to the November level in prices of selected food commodities heavily weighted in the index and of compensating retailers out of subsidy funds supplied by the Treasury to Commodity Prices Stabilization Corp., division of Gordon's War-time Prices and Trade Board. Food items concerned are tea, coffee, milk, butter, oranges, and bananas.

Through December, Gordon and anti-inflationists of the Bank of Canada were afraid these subsidies would not be enough to prevent the rising of the cost-

Business Week • February 13, 1943

"OF COURSE, THE DOORMAN AT
HOTEL PENNSYLVANIA MAY BE
A LITTLE SURPRISED
AT OUR SOLUTION OF
THE TRANSPORTATION
PROBLEM"

"BUT ANYWAY, WE'LL
ARRIVE IN TIME FOR
A FINE DINNER AND
A WONDERFUL NIGHT'S
SLEEP"



This may be carrying things too far, but—

We must accept—and good naturedly!—occasional delays and inconveniences in traveling, in the interest of helping the transportation people give the green light to Uncle Sam's huge volume of official business.

But however you get there, when business takes you to New York, you'll find Hotel Pennsylvania ready to give you the three wartime necessities for travelers

today. (Those things are listed below ... read them.)

It's our business, at Hotel Pennsylvania, to keep you feeling fit as a fiddle when you travel to New York. Just one timely suggestion: Wartime conditions are making it increasingly difficult for us to take care of all those who "just drop in." Won't you make your reservations well in advance? ... and cancel reservations at once when you find you cannot use them?

THREE WARTIME NECESSITIES FOR TRAVELERS



WONDERFUL MEALS

Famous American favorites, prepared according to treasured family recipes unearthed by our Research Kitchens. Delicious and *healthful*!



WONDERFUL SLEEP

Custom-built, inner-spring mattresses ... luxurious feather-and-down pillows ... over-sized sheets ... light but warm virgin wool blankets. *Sleep like a kid!*



RESTFUL RELAXATION

Feelin' blue? Here's what to do: Dine and dance in the beautiful Café Rouge, to the music of a famous orchestra. Enjoy the Cocktail Lounge, too.

TO THE MEN IN THE ARMED SERVICES. A special discount on room rates to officers and men of the U. S. armed forces.

The Statler Hotel in New York
**HOTEL
Pennsylvania**

James H. McCabe, General Manager

Opposite Pennsylvania Station

ROOMS AS LOW AS \$3.85

**YOUR DOLLARS ARE
URGENTLY NEEDED FOR U. S. WAR BONDS**

of-living index above the bonus point. They planned to extend the plan to meats if necessary.

● **Milk and Eggs Lower**—However, a 2¢-a-quart cut in milk prices accounted for about half the drop that has been forced in the index. Moreover, a spurt in productivity on the part of the Canadian hen pushed eggs down by as much as 18¢ a dozen.

Gordon has started to subsidize transportation costs on meats from the prairies to Eastern Canada, but the purpose is to break a short supply situation by allowing producers better prices rather than directly to lower retail prices.

● **Bonus Stabilized**—Ottawa officials now believe they have the inflation spiral licked for the immediate future provided the government's concession to the steel unions of a break in the wage rate ceiling for unskilled workers does not force a general puncturing of the pay roof. They figure the December subsidies will hold the index below the bonus increase point for the next three months.

The drop in the index is for the final month of 1942 only and did not lower it by a full point from September, which would have brought an automatic decrease in the wage bonus. The subsidy policy is not intended to go that far, and, should it show signs of doing so in the next three months, the subsidies will be reduced.

● **Unions Flay C.I.O.**—Ottawa also sees hope that the spread of pressure against the wage ceiling will be prevented in a current campaign, by plant unions in steel mills not involved in the recent strike, against C.I.O. policy of using the

strike weapon in wartime. This campaign is blocking efforts of United Steelworkers of America to secure control especially of Steel Co. of Canada plants. The plant unions are spending funds on newspaper advertising denouncing the C.I.O. for halting war output.

Workers' unions not associated with the big international labor organizations are appealing through ads for help in a fight against an alleged move by the C.I.O. to lobby a bill through the coming session of the Ontario legislature to give the international unions a monopoly in labor representation. The independent unions claim the proposed bill would outlaw them, and Ontario voters are urged to put pressure on their representatives to defeat it.

● **Big Stick Over Business**—Determined to make its first venture into enforced profit-pooling for concentrated nonwar industry stick, Ottawa was prepared this week to get tough with newsprint companies threatening to resist application of a profits pool for their industry set up under last month's Gordon order providing for allocation of newsprint output by the board's newsprint administrator. Effect of the order is that profit on excess tonnage has to be paid into a pool fund administered by Commodity Prices Stabilization Corp. out of which low-tonnage units would draw compensation.

Analysis of pool terms produced an insurrection in the industry. Strongest reaction is in Ontario where big economically operated units claim the plan discriminates against them in favor of overexpanded and overcapitalized units in Quebec.

● **Some See Prorating**—Some consumer-owned companies charge that Ottawa is giving sponsorship to the equivalent of the prorating production scheme that commercial companies tried to have imposed on the whole industry. Part of the protest is that while contraction of the industry may be necessary for the transfer of manpower and other resources to war production, government-controlled distribution of earnings is not a wartime necessity.

Ottawa is replying to the refusal of some companies to contribute to the pool and to payments into it by other companies under protest by invoking clauses of the Natural Resources Mobilization Act which give it unrestricted power over all the resources of the country but which have not up to now been applied. Official intent is to demonstrate that private interests don't dare resist the government.

● **After the Storm**—Passenger traffic on Canadian railroads is under restrictions for the middle part of February to permit recovery of lag in movement of war supplies caused by unusual storm conditions throughout Canada this winter. Parlor cars and dining cars have been temporarily removed from some lines.



POWDERED PROGRESS

Before Pearl Harbor, powdered metal bearings and mechanical elements were more likely to be weighed in ounces than in pounds. Now an operative in Chrysler's Amplex Division weighs a 61½-lb. bronze bearing which has been pressed to accurate size out of powdered metal in about a minute

PRODUCTION

Copper Records

Domestic production and imports soar, and the services cut corners, yet there still isn't enough of the red metal.

Don't look for relief from the tight copper situation this year—or any other year until the war is won. Although 1942's total available supply of copper—domestic, imported, newly mined, scrap, excess inventory—was double the average supply available during each of the five prewar years 1935-39 (BW-Jan. 16 '43, p89), the supply ran 8% short of military and essential civilian requirements.

● **Another Salvage Drive**—Even though the available supply for 1943 promises to be 13% larger than 1942, every estimate indicates it will be short again. Don't be surprised when a blitz salvage drive similar to last year's rubber roundup asks you for all the scrap brass and bronze and other copper-bearing metal around your plant and home.

Electrical requirements, which used to take a fat 50% of the annual peacetime copper supply, are completely overshadowed by military requirements. Two items alone—cartridge brass and bullet jackets for rifle and machine gun ammunition—will take more copper than



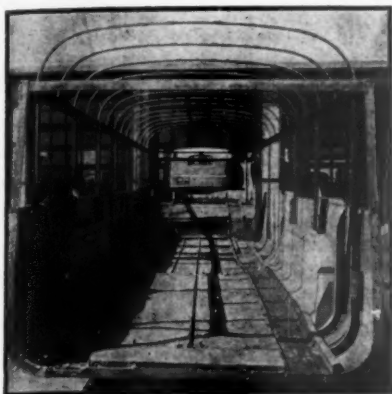
POWER FOR ALUMINUM

World's third largest power development (Coulee and Boulder top it) is near completion in the wilds of Quebec (secret construction began in 1941). Including nearby Chute-a-Caron, the new Shipshaw project will bring Saguenay river power output—mainly for Canadian aluminum industry—to 1,355,000 hp.

peacetime electrical requirements. We can't be the Arsenal of Democracy and have our copper too.

• **Conservation Efforts** — The all-over copper picture would be bleak were it not for the fact that every government procurement and allocating agency — Army, Navy, WPB, whatever — knows the facts, is on its toes to conserve every pound of the metal possible.

Army Ordnance, long a stickler for rigid specifications, urges the research and production departments of its suppliers to find adequate copper substitutes and, when they are found, rewrites specifications to permit them. Navy Procurement, which continues to bar steel shell cases for its guns, permits substitutions for uncounted tons of copper in the interior fittings of its warships. WPB's Conservation Division has issued a "down-grading chart" for brass and bronze castings which shows, among



METAMORPHOSIS

When investments in idle haulaway units were threatened, Detroit's Coach Trailer Equipment Co. converted a few into buses as an experiment—an experiment which has blossomed into a full-blown business. Haulaway trailers are stripped to chassis, steel bows are raised (above), and a combination of plywood and low-cost materials completes the change. Buyers are transit operators, factories, the Army.



...*it's YOUR jump next!*...

IN the narrow cabin the line grows shorter . . . every second, one man less . . . a blast of air through the open port . . . you're next! Pause an instant . . . don't look down . . . then the jump straight into space. Below? The rushing earth . . . miles, it seems. Ahead?

. . . Only the fortunes of war can answer that!

Thousands of young Americans have quietly chosen this as their line of duty in this war. No, you may not be a paratrooper . . . but it's your jump next! Jump into line and join the millions of patriotic Americans who are doing the one thing we all

can do to speed Victory. Invest to the very limit in war bonds.

Invest at least 10% of your income

★ in the best investment in the World ★

TO MONROE USERS . . . You did wisely when you put your figure production on sturdy, precision-built Monroe machines. They always have been a priceless asset — now more so since the Monroe plant is on war production.

Let a Monroe expert analyze your figure work and suggest time-saving short cuts; keep your Monroe operating efficiently

through regular inspections by trained specialists under our Guaranteed Maintenance service. Call the Monroe branch near you or write Monroe Calculating Machine Company, Inc., Orange, N. J.

MONROE

Machines for Calculating,
Adding and Accounting

other substitutions, how a designer may conceivably use malleable iron or a leaded yellow brass containing only 66% copper for a gun metal containing 88% copper.

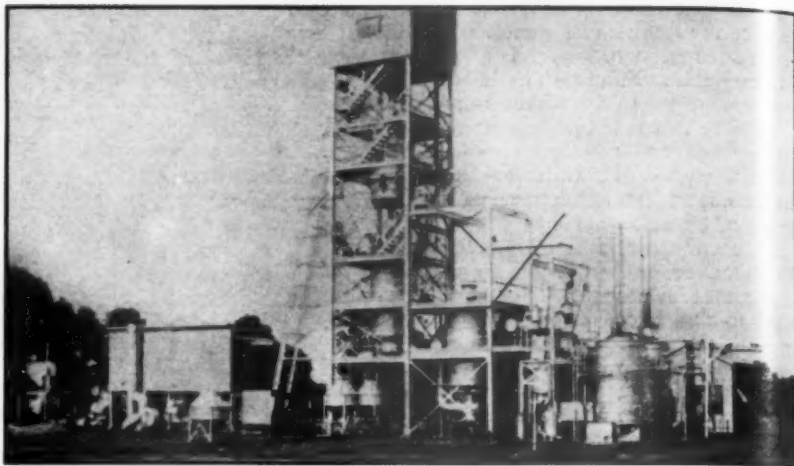
● **Some Real Savings**—Encouraged by the conservation policy of Army Ordnance, one munitions maker, for example, expects to save 15,000,000 lb. of brass this year by turning fuse heads out of steel, 125,000 lb. of copper by using steel stampings instead of gilding metal (95% copper) for a little spring retainer, 20,800,000 lb. of brass in fuse boosters now assembled out of steel stampings and turnings.

That there is room and plenty for savings throughout the whole gamut of war material is indicated by the considerable amounts of copper to be found in just two classifications. A military tank requires over 500 lb. of copper in its inwards. A 30,000-lb. bombing plane takes 3,400 lb. of the red metal, not including ammunition.

● **Pencils Do Their Bit**—Enough copper for 126,000 machine gun cartridges will be saved this year by the elimination of brass ferrules from pencils. Silver busbars in new aluminum reduction plants will release 13,000 tons of copper normally used for conducting electrical energy. Tipping the lid of electrical codes permits motors to be operated at capacities 15% over their nameplate capacities—but within the safety factors built into them by their manufacturers—and thus saves the copper that might have been used for larger motors. Strangely enough, the substitution of steel for brass in shell cases is not expected to save copper, the steel production having been scheduled over and above regular ammunition requirements.

Manufacturers of essential civilian requirements are likewise contributing their cupric savings. Scale manufacturers who formerly used brass levers and brackets now get along beautifully with cast iron. Building hardware manufacturers mold doorknobs out of plastic and plate them with a fraction of the brass that would be used in an all-metal design. Oilless bearing manufacturers press and sinter many of them out of powdered iron instead of brass. Home plumbing fittings may now be malleable or cast iron or plastic or a bit of each.

● **Import, Output Rise**—One sizable source of copper last year and this, the excess inventories of sheets and tubes and shapes, may shortly be dried up, for it is rumored in the copper and brass trade that Copper Recovery Corp. will have completed its yeoman job of gathering in the inventories by the end of summer. Meanwhile, however, copper imports have been hitting all time highs, and domestic production continues to climb, despite the fact that supporting figures (which might further encourage production) are subject to censorship and cannot be reported.



Judgment on the efficiency of the Madaras sponge iron process to reduce ore to metallic iron at low temperatures by chemical gas action awaits

further tests in the pilot plant near Longview, Tex. Because of limitations, the process has little war utility but may have postwar possibilities.

Rude Awakening

Early sponge iron tests show a series of limitations that may deflate dreams of a big Texas war project.

An East Texas dream of merging native iron ore and natural gas to rival Birmingham's combination of ore and coal may have postwar possibilities, Bureau of Mines officials in Washington concede, but for war utility, the Madaras sponge iron process (BW—Dec.26 '42,p14) leased by the bureau has definite limitations.

● **Still Being Tested**—Sponge iron tests haven't been completed as yet, thus final judgment must be withheld. Capacity of the pilot plant is about 25 tons every eight hours—small in iron and steel operations. To increase capacity, by building either a big plant or several small ones, would require much structural steel, a factor that rules out expansion plans for the present.

The process takes its name from Julius Madaras, native Hungarian who promoted a \$250,000 investment by East Texas business men. Like other sponge iron processes, it reduces ore to metallic iron at a temperature far below the 3,000 F. generated in a conventional blast furnace.

● **How It Works**—Madaras got the idea that the oxygen could be removed from ore (iron oxide) by the chemical action of gas. His problem was to "crack" the methane (CH_4) of natural gas into carbon monoxide (CO) and hydrogen. The carbon monoxide in turn would remove the oxygen from ferrous oxides, leaving pure iron and carbon dioxide.

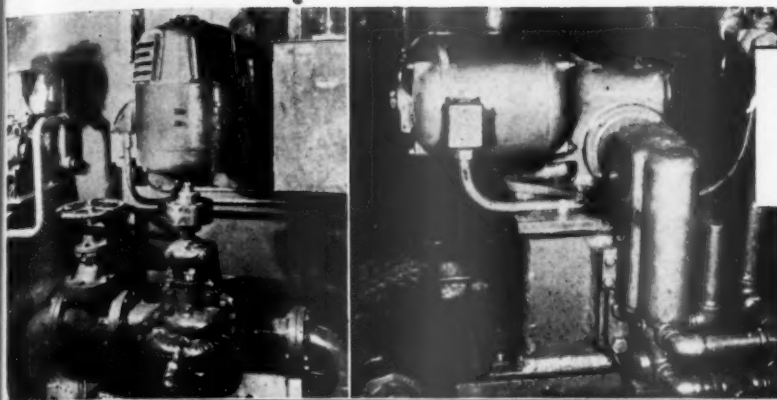
Madaras's pilot plant near Longview (see illustration) pulsates this reformed gas into a steel vat, mounted on a tower similar to an oil well derrick. Above this is another tank in which the elements are preheated to about 1,800 F., the temperature used in the reduction chamber. Iron is removed through a trap door at the bottom of the lower tank.

● **True Comparison Lacking**—Because the ore used is fine and dusty, the product is small grains of iron, which can be heated and pressed to steel furnace size.

Until the process has established a long-term operation record, any comparison with blast furnace iron-making must be speculative. Interesting phases of such speculation revolve about the possibility of using relatively small units of investment, compared with some \$6,000,000 to \$10,000,000 or more for a blast furnace with its battery of coke ovens, ore and limestone docks, and handling equipment.

● **Competition in Byproducts**—Using preheated air, coke for fuel and reduction, and limestone for flux, a blast furnace's rated capacity is 1,000 tons to 1,300 tons a day. Because waste iron is recharged into the furnace, because resulting gases are used as fuel and the slag byproduct can be used as construction material, a blast furnace is regarded as one of the most efficient pieces of industrial equipment. If any sponge iron process takes its place, it will have to prove thoroughly efficient and workable.

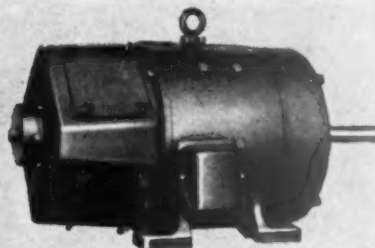
If the steel industry keeps demanding more iron, one of the most hopeful possibilities lies in adapting a Swedish method of ore reduction, according to a Bureau of Mines official. This could utilize brick kilns, which are numerous



Extreme Left—Century $7\frac{1}{2}$ horsepower, vertical mounted, direct current, drip proof water pump motor.
Left—Century $\frac{1}{2}$ horsepower motor driving a Diesel oil pump.

CENTURY MOTORS and GENERATORS

For the Toughest Sea-Going Service
Meet the Rigid War Requirements of
Naval and Merchant Marine
Applications



$7\frac{1}{2}$ horsepower, direct current, ball bearing, fabricated steel, water proof Navy motor.



Century 2 horsepower squirrel cage fabricated steel motor with cast steel end brackets.

Century shipboard motors and generators are built to stand up under

- The toughest sea-going service
- The shocks of gunfire and bombing
- The rigorous climatic conditions of the seven seas

They meet Navy Specifications 17M10 and 17M17, A.I.E.E., recommended practice on shipboard No. 45, and the Maritime Rules of Shipping.

Century Motors' famous ability to "keep a-running" is daily being demonstrated and thoroughly proven on the high seas in applications such as those mentioned above.

Your nearest Century Application and Service Engineer will gladly tell you all the advantages of Century Motors for any job.

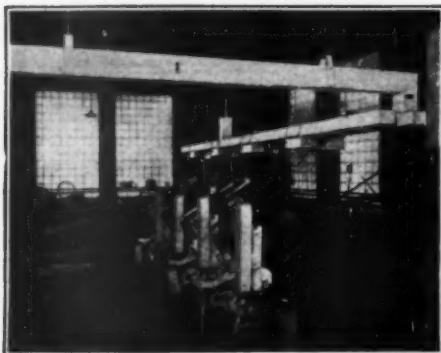
CENTURY ELECTRIC CO.
1806 Pine Street, St. Louis, Mo.
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Among the many Naval and other marine applications of Century Motors that have been made and are being made today are the following:

Diesel fuel pump motors
Bilge pump motors
Transfer pump motors
Brine pump motors
Cooling water pumps
Fire pump motors
Capstain motors
Hoisting machinery motors
Pumps for fresh water stills
Air compressor motors
Refrigeration compressor motors
Steering gear motors
Fan and blower motors
Oil burner motors
Generators and motor generating sets for light, power, and communication
Workshop machinery motors



One of the Largest Exclusive Motor and Generator Manufacturers in the World.



At left: A dual installation of 125 Amp. "JUNIOR" Type [Ⓐ] Busduct in this plating room supplies low voltage direct current to electrodes, and alternating current to motors driving the tumbler. [Ⓑ] SHUTLBRAK (Operating Type) Plug-in Devices are used for controls.



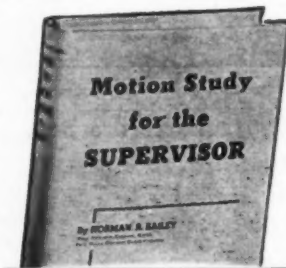
BUSDUCT helps save rubber

In remodeling or expanding the electrical distribution systems of large, small and medium sized plants, [Ⓐ] Busduct, which contains no rubber, fits perfectly into the picture... It saves production hours; machines may be moved to any desired position, plugged in quickly, and operation started with minimum loss of time... Installation cost is low—salvage value high... Designed for 2, 3 and 4 wire feeder systems; 250 volt DC, 575 volt AC, maximum. Plug-in type capacities, 125 to 1,000 Amps. Feeder type, 250 Amps. and up... Write for illustrated Bulletin 65, which shows the application of this flexible, economical and efficient system to your distribution problems.



How to stop waste motion and speed up production

This book gives a simplified, practical method of motion study for analyzing operations quickly and easily, enabling the foreman to employ motion study as a useful, everyday tool in speeding production and increasing output in his department. It shows how to detect wasted effort in operations, how to recognize the cause of ineffective work, and how to develop better job methods.



MOTION STUDY for the SUPERVISOR

By Norman R. Bailey

Wage Standards Engineer,
Kodak Park Works, Eastman
Kodak Co.

Price only \$1.25

JUST PUBLISHED

Now the foreman or supervisor may use motion study as easily as any everyday management process. With only a stop-watch and a simple, basic "formula", he can analyze any operation for improvement. Even operations to which it formerly was unprofitable to apply motion study may be analyzed by the simplified methods explained in this book. Here is a practical means of eliminating ineffective work and of spotting opportunities for methods improvement, with worthwhile cumulative benefits in greater production per hour.

Shows you:

- how to break down any operation into only 5 "work elements" common to all operations
- how to time an operation
- how to identify useful or wasted effort
- how to reduce repetitive motions by simple changes in layout and planning
- when to use simple fixtures for eliminating wasted effort
- how to train the operator in new methods

EXAMINATION COUPON

McGraw-Hill Book Co., 330 W. 42 St., N. Y. C.

Send me Bailey's Motion Study for the Supervisor, for 10 days' examination on approval. In 10 days I will send \$1.25, plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

Name

Address

City and State

Position

Company BW-2-13-43

and widely scattered, to heat small retorts that are lined, top and sides, with powdered coal, and filled with ore.

• **Swedish Process Slow**—Unlike the Madaras process, this would require limestone to remove the sulphur contained in most coal. Its principal advantage would be "batch" production of iron in hundreds of small units, without new allocations of steel or other critical materials. Principal disadvantage is that it's about the slowest known method of iron ore reduction.

If it can be speeded up, perhaps by devising some method of providing air space around the coal and ore particles inside the retorts so that heating can be done through convection rather than induction, this process also may get some pilot plant tests.

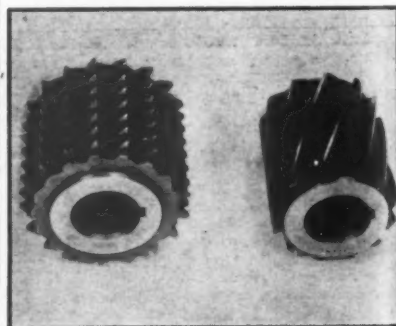
Saving Tools

Broken and worn machine tool cutters are being returned to work after repairs that save money and materials.

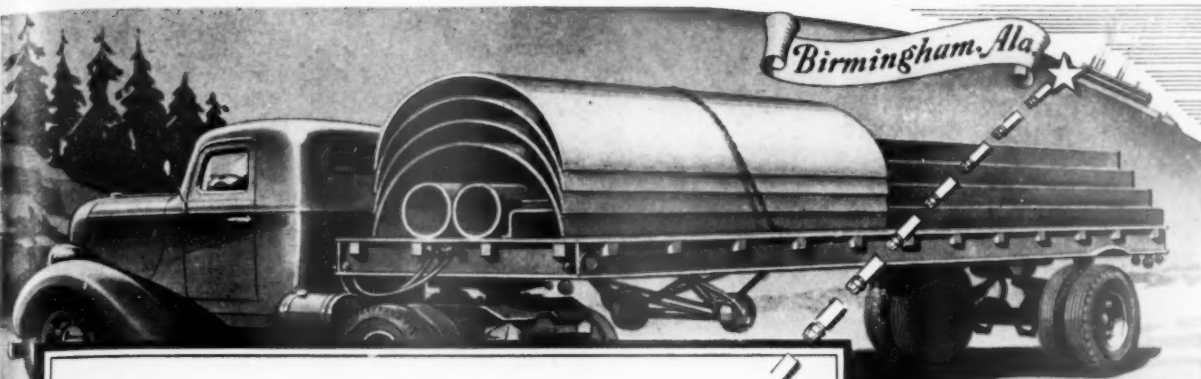
Cutting tool life always has been limited by two factors—normal wear and the skill with which it is used. Skilled use, the great variable, has been diluted by employment of inexperienced workmen who do not have the master operator's touch. The result has been a growing pile of tools on the scrap heap, production delays or stoppages, and loss of precious alloy metals.

• **Salvage Drive Begun**—Noteworthy in the nation-wide tool salvage drive to conserve critical metals has been a repair and renovation program by General Motors. Results are exhibited at Detroit, attracting tool experts of many other automotive companies. Many of these experts are amazed to learn what has been done and what they also can do.

They see milling cutters with one



When a worn hob (left) was too far gone for gear cutting, General Motors used to scrap it. Now it regrinds it as a spiral milling cutter (right) hardly distinguishable from a new one.



Truck-Trailers

GO DOWN TO THE SEA WITH SHIPS!

BUILD sea-going ships in the mountains, 300 miles from water?

That's about what the Ingalls Iron Works Company, of Birmingham, Alabama, does! In its Birmingham mills it fabricates the big 18,000-ton C-3 cargo ships it builds for the Maritime Commission, then hauls the parts to the shipyards of its subsidiary, the Ingalls Shipbuilding Corporation, at Pascagoula, Miss., on the gulf, for final assembly into ships.

Truck-Trailers, carrying 10 to 15-ton loads (but pulled by economical 2 to 3-ton trucks) take much of this fabricated steel on its 300-mile overland journey, delivering it overnight. With cargo ships worth almost their weight in gold to the United Nations, that speed and flexibility of delivery is

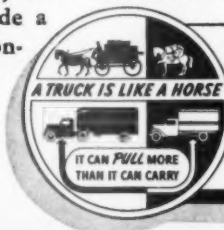
more than just manufacturing efficiency . . it's a big step toward victory.

The Ingalls Iron Works has found still another vital use for Truck-Trailers. Three Fruehauf Trailers and one motor truck are used in a shuttle operation between the company's loading dock, "pickling" plant and steel mills. While one Trailer is enroute to its destination, the others are being loaded and unloaded. Truck and driver are never wasting time and money. And one motor unit literally takes the place of three. So, besides handling a job that couldn't be handled any other way . . for hauling steel is one of the toughest of all transport jobs . . Truck-Trailers provide a major economy, too.

REMOVE THE BARRIERS!

What are trade barriers? They are artificial, legal restrictions created by many States to prevent the efficient movement of material between States. There are hundreds of them, including restrictions as to size and weight of vehicle, duplicate or over-lapping licenses, punitive taxes, port of entry barriers, nuisance inspections, conflicting equipment requirements, etc. Adding to the distribution cost of nearly every commodity, trade barriers are a costly burden to all consumers. Slowing the movement of war goods, they are delaying, if not endangering, our victory. The public should demand that these barriers be removed promptly.

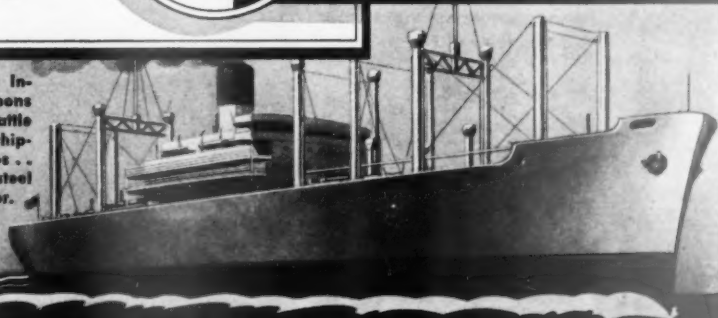
World's Largest Builders of Truck-Trailers
FRUEHAUF TRAILER COMPANY, DETROIT
 Member Automotive Council for War Production



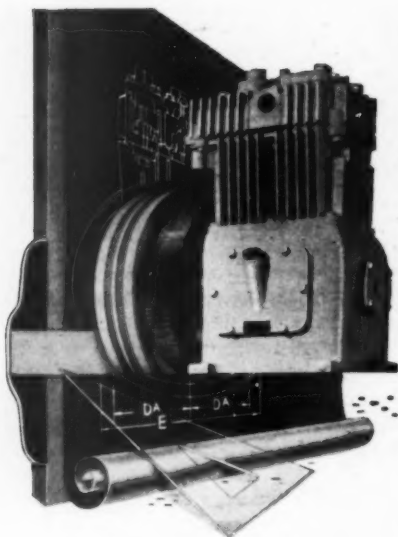
FRUEHAUF Trailers
 "ENGINEERED TRANSPORTATION"
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The C-3 ships produced by Ingalls are carrying precious weapons and supplies to our many battle fronts. Ingalls was the first shipbuilder to 100-percent weld ships . . saving 16% to 20% in valuable steel and even more in time and labor.

Pascagoula, Miss.



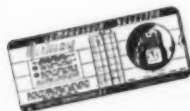
TRUCK-TRAILER TRANSPORT IS DOING AN ESSENTIAL JOB FOR ALL AMERICA



Modern Design

★ INSIDE AND OUT ★

Modern, improved design—inside and out—results in greater over-all efficiency for Quincy Compressors. Cooling area is increased 12%. Construction is simplified. Lubrication is more thorough . . . more positive. Quincy builds air compressors exclusively. Over a period of more than 20 years this policy of specialization has helped to make the name Quincy a symbol for efficient and dependable air supply. If you have compressed air problems in connection with war work, ask a Quincy Compressor Specialist to help you solve them.



new
AIR COMPRESSOR
SELECTOR

Accurately selects correct size and type compressor in one minute! Works like a slide rule. One simple setting gives: free air delivery, r.p.m., piston displacement and h.p. motor required. . . Sent FREE upon request. Address Dept. W-1.

Quincy
COMPRESSORS

QUINCY COMPRESSOR CO.
QUINCY, ILLINOIS

Branch Offices:
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or two teeth broken out, or perhaps with the body split across its middle, put back in working order. Metal flowed under torch onto the stubs of missing teeth, machined to shape, makes the cutter function perfectly. Split cutters have been silver-soldered so skillfully that often the cleavage lines are difficult to locate. Other milling cutters, with tips worn undersize, have been reground into counterbores, reamers, and chamfering tools. One milling cutter on exhibit was ground out of a worn gear shaper cutter.

• **Saving Dovetailed Tools**—Dovetailed turning tools wear from the side; when worn excessively, the dovetails split under cross-stress. General Motors solved this problem by welding the cutter sections to ordinary carbon steel extensions, into which a dovetail is machined. Now the tool steel can be worn down to the weld, within $\frac{1}{8}$ -in. or so of its edge, without worry over the dovetail's splitting. Previously, an inch or more of alloy steel stub had been discarded. In another method, pairs of thread chasers are welded end to end, furnishing enough dovetail length to utilize cutting edges to the limit.

Ordinary machine shop practice has been to braze cutting tips of tungsten carbide or high speed steel to alloy shanks. In the G. M. exhibit are such tips brazed onto carbon steel shanks. One carbide tip is brazed onto cast iron. Cutting tools are even made by flowing a hard facing of Stellite onto a carbon

steel shank. There are also examples of worn counterbores being annealed and forged into tool bit stock, ready to be cut and employed on shanks as needed.

• **Stones and Gages Saved**—Another salvageable item is honing stones which wear down quickly to a point of uselessness, and about half the original stone usually is discarded. One G. M. saving results from pairing two worn stones, turning them on their sides, and joining them to a base. Then they can be returned to service, with the result that the ultimately discarded ends each represent a fourth, rather than a half, of the original stones.

Worn tool steel gages are being repaired with tungsten carbide tips. Inserted on gage surfaces at critical areas, the tips wear from 10 to 40 times longer than the original tool steel, far overbalancing the added cost.

• **Average Cost: 10%**—The expense of such salvage work, says H. T. Johnson, director of the G. M. Standards Section, averages little more than 10% that of tool replacement. This is understandable by a glance at heavy, complicated drills which cost from \$50 to \$100 new, whose breaks are soldered and then ground smooth again for only a few dollars in skilled labor time. The savings are so obvious that General Motors plans to make the salvage program permanent to realize important dollar savings even when high alloy and tool steels become plentiful again after the war.



CELESTIAL CONFAB

Set up to foment the interchange of war production ideas (BW—Jul. 4'42, p22), the Aircraft War Production Council membership meets at every

opportunity to discuss problems. En route by air from Los Angeles to San Diego, Donald Douglas, Douglas Aircraft president (lower left), debates a point with Robert E. Gross, Lockheed Aircraft chief and head of the council.

"Yes! 3 typewriters can do the work of 4!"

and typists

25%
OF OUR TYPEWRITERS
HAVE GONE TO WAR!
KEEP YOURS BUSY



Note the "Forms with the Punch" which engage the pins on Standard's Registrator platen for positive feed and continuous writing

FEWER typewriters . . . FEWER typists . . . MORE paper work than ever!

WHAT'S THE ANSWER? Typists are hard to get—typewriters are going to war—more clerical work every day! With this triple-threat facing your war production, here is something you should know: Standard methods make 3 typewriters do the work of 4, *and even more important*, enable 3 typists to do the work of 4.

How? Standard makes it possible to write systems of control continuously with Standard Kant-Slip forms. No radical changes are involved, no special training for typists is required. Many time-wasting, non-productive operations are immediately eliminated—typing output is often increased 25% to 50% or more.

At the same time, Formcraft engineering—an important part of

Standard's service—eliminates useless forms, saves paper, combines related forms for one writing, streamlines form design for faster, more accurate typing—thus speeding the flow of paper work.

Something new? Frankly, no. Thousands of America's leading companies have been using Standard methods over the past 30 years. Today the Standard organization of more than 1,000 people is ready to serve additional war industries and government organizations.



GET YOUR COPY of "What's the Answer?" — Standard's 28-page booklet fully describing how you can send typewriters to war, do more work on remaining machines, and relieve the pressure of personnel problems with Standard's typed and handwritten systems of business control. Write today.

STANDARD'S Cabinet Model Register makes the pencil a business machine. Makes it possible to convert many typewritten records to handwritten systems—saving typewriters. Fully described in "What's the Answer?"



THE STANDARD REGISTER COMPANY
201 ALBANY ST. DAYTON, OHIO
Pacific Coast: Sunset McKee-Standard Register Sales Co., Oakland, Calif. Canada: Crain Printers, Ltd., Ottawa, Ont. Great Britain: W. H. Smith & Son, Ltd., London.

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Standard Systems of Business Control

○ "The Forms With the Punch"

○ These holes mean The Standard Register Co. ○

TRAP THE NOISE DEMONS



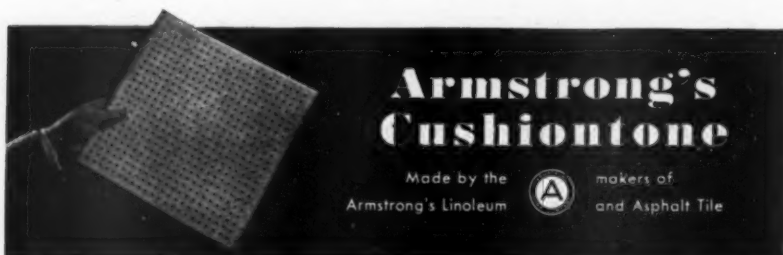
... in ceilings of Armstrong's Cushiontone

YOU DON'T NEED scientific instruments to prove that noise demons ruin office efficiency. You know it. The best way to get rid of these nerve-janglers is to TRAP them in low-cost ceilings of Armstrong's Cushiontone.

Up to 75% of the sound that strikes a Cushiontone ceiling is absorbed, thanks to the 484 deep noise-quieting holes in each 12" x 12" unit. And this high efficiency is permanent, unaffected by maintenance or repainting.

Armstrong's Cushiontone is installed quickly, with minimum interruption to business. Maintenance is simple. The factory-applied, ivory-colored surface helps improve illumination.

WRITE FOR FREE BOOKLET which gives all the facts about Armstrong's Cushiontone. Armstrong Cork Company, Building Materials Division, 3002 Stevens Street, Lancaster, Pennsylvania.



NEW PRODUCTS

Resistometer

Explosions set off by static sparks in gunpowder plants, hospital operating rooms, and other places with explosive atmospheres have been greatly reduced since the invention of conductive floors



and shoes with conductive soles. But if such shoes are worn with socks made of either silk or wool, the shoes act as though they were nonconductive, and the wearer becomes a potential spark maker as he moves about the floor.

To meet this problem, Davis Emergency Equipment Co., Inc., 45 Halleck St., Newark, N. J., is building the Resistometer, a new instrument for testing a worker's conductivity. He does not have to remove his shoes for inspection but simply stands on two floor plates while his condition is shown by a meter calibrated in two zones: safe and unsafe. Floors can also be tested.


Shellac Substitute

A furniture manufacturer who has tried "Zinlac," the new shellac substitute recently formulated by William Zinsser & Co., Inc., 516 W. 59th St., New York, reports that it is "an excellent substitute. . . . It does not dry quite as fast as shellac, and it is slightly harder to sand; but otherwise we think it will do a swell job."

Like shellac, it comes in both orange and white, has no disagreeable odor, is shipped in barrels or 5-gal. pails.

Casualty List

from the Home Front



Since Pearl Harbor:

46,500 Workers Killed

**165,000 Workers
Permanently Disabled**

4,000,000 Accidents Reported

**450,000,000 Man-Days Lost
Due to Accidents**



So far in this war, "accidents"—both on and off the job—have proven a more devastating enemy than the Nazis and Japs combined. Government figures show that, since the start of the war, there have been many more casualties—both killed and injured—among American industrial workers than the total military casualties of all our armed forces.

Every day since Pearl Harbor, over 11,000 war workers have been killed or injured—on or off the job. And the tragedy of it is that most of these accidents could and *should* have been prevented.

What can we do to stop this appalling loss of manpower? The National Safety Council has proved time after time that accident rates *can* be cut—50 per cent and more, in factories and industrial communities that use its preventive measures.

The Birdsboro Steel Foundry and Machine Company has for years conducted preven-

tion campaigns to cut down accidents on the job, in the home and on the highway. In addition we have now joined in the nation-wide accident-prevention campaign being conducted by the War Production Fund to Conserve Manpower.

This campaign—instituted by American industry, with the endorsement of the President and the War Production Board—is being conducted to help facilitate a vastly expanded program of the National Safety Council for the protection of American war workers.

The War Production Fund offers the management of American business an opportunity to be of *practical* help in the vital task of stamping out industrial accidents. Full information can be obtained from the address below.

For further information, write to

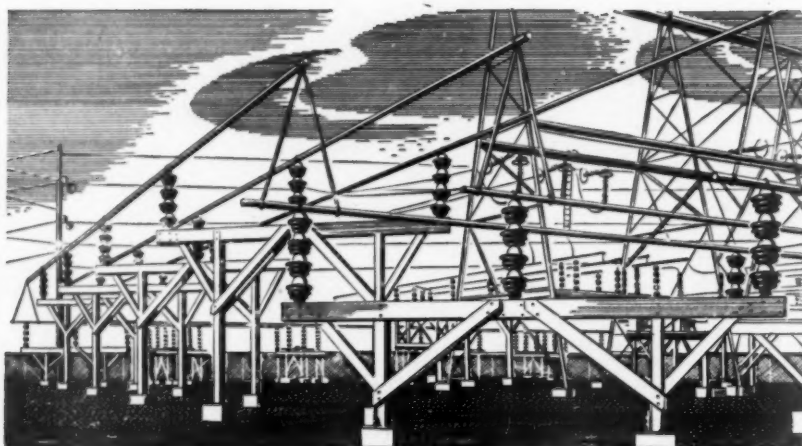
War Production Fund to Conserve Manpower

Chrysler Building, New York, N. Y. LExington 2-0280
William A. Irvin, National Chairman



SAVE
Manpower
for
Warpower

BIRDSBORO STEEL FOUNDRY AND MACHINE CO., BIRDSBORO, PA.



WOOD Takes Over Another Exacting Assignment

POWER COMPANIES can't gamble on reliability when they build. Their structures go up to stay. So, when they build with Wolmanized Lumber*, you know they are convinced of its worth.

THIS LUMBER is going into a lot of the utilities' construction, releasing scarce materials that are badly needed elsewhere for fighting equipment. There is no question of its ability to make good on this work. Service records covering millions of feet of Wolmanized Lumber, some of it on the toughest kind of assignments for over seventeen years, bear witness to this fact.

WOLMANIZED LUMBER is ordinary wood "alloyed" with Wolman Salts* preservative to make it highly resistant to decay and termite attack. Vacuum-pressure impregnation under exacting technical control accomplishes this. Wolmanized Lumber is clean, odorless and paintable. The preservative is non-flammable.

IT COSTS LITTLE more than ordinary wood construction. All of the advantages of building with wood are retained; easy, fast erection, lightness, strength and resilience. Maintenance costs are certain to be low, because of the fine performance of Wolmanized Lumber under adverse conditions. American Lumber & Treating Company, 1656 McCormick Building, Chicago, Ill.

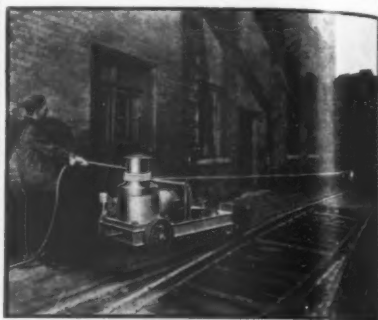
*Registered Trade Mark

"Alloyed" FOR ENDURANCE
WOLMANIZED LUMBER



Portable Car Spotter

The new Link-Belt Portable Car Spotter, developed by Link-Belt Co., 2410 W. 18th St., Chicago, is so balanced on its wheeled frame that one



man can roll it to location. Procedure is to anchor it with a chain, connect it to the nearest power outlet, lock one end of a cable to a freight car, wrap the other end around the capstan, and let the motor do the work.

Locking System

When a steel stud bolt is repeatedly screwed into and out of aluminum or magnesium, there is likely to be wear and tear on the softer material. Resultant loose fits are the bane of maintenance crews in the aircraft, automobile, and other industries. Protective inserts



and other liners are prone to back out as the stud is unscrewed, causing further trouble.

To prevent such an insert from backing out, Jose Rosán invented the Rosán Locking System. Business part is a lock ring with serrations "inside and out." After a special insert is screwed into soft metal, the ring is forced into place with its internal serrations interlocked with serrations on the insert and its external serrations gripping the surrounding metal. Bardwell & McAlister, Inc., 7636 Santa Monica Blvd., Hollywood, Calif., manufactures rings, inserts, and special applications of the Rosán system.

WAR BUSINESS CHECKLIST

A digest of new federal regulations affecting priorities, price control, and transportation.

Critical Materials List

WPB has released the seventh edition of its material substitutions and supply list. Among the major materials whose supply has become more critical since publication of the previous list Nov. 2 are zinc, chromium, lucite, benzol, methyl alcohol, and birch and Douglas fir plywood. Copies of the list are available on request from the Conservation and Substitution Branch of WPB's Conservation Division.

Petroleum Transportation

The Defense Plant Corp. has authorized contracts for the conversion of 100 railroad boxcars for transportation of petroleum products to the East Coast. Conversion is accomplished by fitting the cars with canvas tanks which have been treated with synthetic rubber to make them leakproof (BW—Aug. 22 '42, p. 20; Nov. 21 '42, p. 62).

The Office of Defense Transportation has announced conversion of 100 container cars, low-sided gonodolas carrying five large steel tanks, for the transportation of kerosene from Texas City, Tex., to Chelsea, Mass. These cars were formerly used for cement.

Tires

OPA has amended the tire rationing regulations to permit dealers whose business was interrupted by rationing to obtain an initial inventory to reenter the trade. Other persons who desire to enter the tire and tube business may also obtain initial inventory by meeting the same requirements as former dealers.

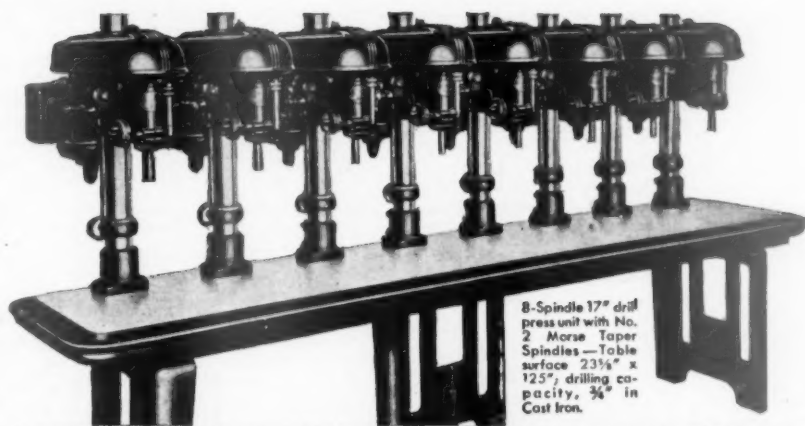
Another amendment permits switching of tires among passenger cars operated by a federal, state, local, or foreign governmental agency, in order to reduce substantially the number of tires needed for reserve pools by allowing relatively few pool tires to be used for a large number of automobiles. (Amendments 7 and 8 to Ration Order 1A.)

Shoe Repairs

To take care of increased shoe repair demands caused by shoe rationing, sole leather tanners and converters have been directed by WPB to set aside 25% of their output during February for shoe repair shops, as compared with 20% in December and January. (Supplementary Order M-80-g.)

Steel Drums

Certain additions and deletions have been made to the list of commodities that may not be packed in steel drums. Added are sand, water, birdseed, and eleven specified chemicals. Removed from the list, because substitute containers were found impractical, are 14 other chemicals. Drums with more than 30-gal. capacity and a steel gage



8-Spindle 17" drill press unit with No. 2 Morse Taper Spindles—Table surface 23 1/2" x 12 1/2", drilling capacity, 3/4" in Cast Iron.

DRILL PRESS COMBINATIONS *exactly as you need them!*

New, Exclusive Delta Machine gives you as many spindles as you need — spaced as you need them — at astonishingly low cost!

Designed and developed by Delta, pioneer producers of low-cost production drilling equipment, these new machines now give you just the number of spindles you need for any production set-up—two, three, six, eight, ten spindles or fifty—to suit your exact requirements.

Available with 14" or 17" heads—or any combination of both, with Jacob's chucks or No. 1 Morse-taper spindles in 14" heads; Jacob's chucks or No. 2 Morse-taper in 17" heads—high speed or low speed. Completely flexible and remarkably low in cost!

This new type of machine—already in use in many high production plants—gives you an efficient, continuous production line, eliminating transferring between machines—and provides maximum working surface.

Ideal for special set-ups on long, heavy work, because sectional tables can be made as long as necessary. Tables are accurately ground and fitted and the entire unit is heavy, rugged and accurate.

SEND FOR CATALOG

For full details on this new "Tailor-made" drill press development—get in touch with your nearest Delta Industrial Distributor. Or write us today, telling how many drill press heads you could use on a set-up like this, whether you need 17" or 14" heads or a combination of both, and how far apart you want the heads placed. We will gladly send you complete specifications, prices and any other information you wish.

THE ARMY-NAVY "E"—Awarded for excellence in the production of machine tools vitally needed in the war effort.



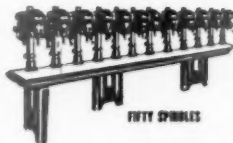
TWO SPINDLES



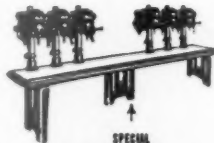
THREE SPINDLES



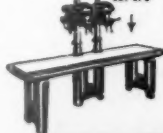
SIX SPINDLES



FIFTY SPINDLES



SPECIAL SET-UPS



THE DELTA MANUFACTURING COMPANY
989 E. Vienna Ave., Milwaukee, Wis.

Please send us without obligation full information on your new drill press development. We are interested in ... drill presses on this set-up 17", 14", spaced ... inches apart.

Name
Address
City State

lighter than 23 have been exempted from the order. (Order L-197, as amended.)

Tools

Certain specified light power-driven tools for both wood and metal working have been put under strict control by WPB. Sale or delivery is restricted to orders bearing ratings of A-1-a, or higher, and production is limited to a 60-day anticipated inventory to fill such orders. However, production in any 60-day period may not exceed one-sixth of 1941 sales. (Order L-237.)

Potatoes

The Department of Agriculture has announced that it plans to support Irish potato prices in 1943 at a level equivalent to

92% of parity. Growers who plant at least 90% of their 1943 acreage goals are eligible to participate. In addition, an incentive payment program will be operated by the Department under which growers will receive 50¢ a bushel additional for acreage in excess of 90%, but less than 110%, of their goals, based on normal yield per acre.

Rice

In order to provide for equitable distribution of civilian supplies of rice throughout the United States, the Department of Agriculture has issued an order prohibiting any miller or other "first owner" from shipping to any state in the current crop year more than 85% of the amount be shipped to that state during the last crop year. The order applies only to that 40% of stocks

available for civilian distribution. (Amendment 1 to Food Distribution Order 10.)

Whisky

Dollar-and-cents price ceilings have been placed by OPA on all domestic whisky in bulk and warehouse receipts at the highest March, 1942, prices of Kentucky whisky in bulk. The ceilings replace individual sellers' March, 1942, peak prices and represent slight increases as Kentucky whisky has commanded a premium over other states. OPA adopted the Kentucky ceilings for general application, because quality standards for whisky have never been clearly defined and it was administratively impossible, therefore, to establish any basis for price classification other than age. Sales in bulk at any degree of proof other than the original proof are prohibited except for export sales. (Amendment 4 to Regulation 193.)

Pleasure Driving Ruling

OPA has ruled that a worker who goes to a union meeting is making a trip "directly related" to his occupation, and that driving to and from such meetings is therefore permitted.

Peanut Oil

Refiners of peanut oil must set aside 25% of their output for purchase by the Commodity Credit Corp., for allocation to war requirements by the Food Distribution Administration. (Food Distribution Order 14.)

Insecticides

Agricultural insecticides and fungicides whose formulas have been changed by wartime shortages may be priced under a new, simple method set up in Order 260.

Regulation 315 sets dollar-and-cents ceilings on lead arsenate somewhat lower than maximum prices previously in effect.

Bakery Products

In a move designed particularly to aid the small neighborhood baker, OPA has instituted a new price formula for all bakery products other than bread and cookies, allowing customary markups on the basis of new costs. (Regulation 319.)

Other Priority Actions

Broadcasting stations are granted a rating of AA-2X, instead of A-1-j as formerly, for purchase of maintenance, repair, or operating supplies under Order P-133, as amended. . . . Use of specified higher grades of agave fiber in the production of binder twine is prohibited by Order M-84, as amended. . . . In order to help meet the 1943 food production goals, Order M-273-a temporarily stops deliveries of harness leather in the hands of tanners and dealers except for use in making leather for farm and draft animals. . . . Order M-277 imposes strict use control on vegetable tanning materials. . . . Food Distribution Order 15 requires producers of cheddar cheese to set aside 50% of their monthly production for purchase by war agencies. . . . Washed, but undissolved, film scrap is put under allocation control by Order M-196, as amended. . . . Under Order M-38-c, as amended, orders rated



**"BULLETS" for the
MACHINE GUNS OF INDUSTRY!
must be UNIFORM . . .
ACCURATE . . . DEPENDABLE**

No defective ammunition wanted here! To speed Victory Production, rivets must be round and true, accurate in size, uniform in material.

OLIVER makes that kind of rivets by the tons—in hundreds of sizes and types—as well as millions of bolts and nuts accurately made, cleanly threaded for quick, easy assembly and firm gripping.



OLIVER
IRON AND STEEL

PITTSBURGH,

Corporation

PENNSYLVANIA

ARMY
E
NAVY

E. B. Badger & Sons Co.
Point Pleasant, W. Va.
Cauldwell-Wingate Co.
Orangeburg, N. Y.
E. I. du Pont de Nemours & Co., Inc.
(Two plants)
S. E. Evans Construction Co.
Camp Chaffee, Ark.
Freeton Construction Co.
Baxter Springs, Kan.
Hunkin-Conkey Construction Co.
Cliff Park Village, O.
J. A. Jones Construction Co.
Hoffman, N. C.
James King & Sons
Staten Island, N. Y.
Manhattan Construction Co.
Camp Chaffee, Ark.
Merck & Co., Inc.
(Two plants)
F. H. McGraw & Co.
Baxter Springs, Kan.
Poirier & McLane Corp.
Orangeburg, N. Y.
Frederick Snare Corp.
Port Newark, N. J.

(Names of winners of the Army-Navy award for excellence in production announced prior to this new list will be found in previous issues of Business Week.)

A THIN LAYER OF CLADDING... NICKEL, MONEL OR INCONEL



...on the inner surface
makes these critical
metals go farther!

Much equipment used in magnesium plants now going into operation must be both strong and corrosion-resistant.

It must be capable of prolonged operation at high capacity; and, equally important, the product must be guarded against harmful metallic contamination. In meeting these requirements, savings of 80% to 90% in strategic materials were effected by using Lukens Nickel, Monel and Inconel-clad steel.

With these bi-metals one pound of Nickel, for example, may do the work of five or even ten.

Nickel-clad steel plate was first marketed in 1929, and later followed with Monel and Inconel-clad steel. Millions of pounds of these useful bi-metals have been employed in building evaporators, condensers, autoclaves, heat exchangers, storage tanks, tank cars, chlorinators, rotary salt dryers, settlers and innumerable other units now producing materials vital to the war effort.

Nickel, Monel and Inconel-clad steel provide protection against corrosion where it is needed... on the inside of equipment in contact with corrosive products. Consisting of a solid layer of

corrosion-resistant material permanently bonded by hot rolling to 4 to 9 times its own thickness of steel, Lukens clad steel is economical to use, and substantially reduces the amount of Nickel, Monel or Inconel needed for a given piece of equipment.

Manufacturers of equipment vital to victory, who may be fabricating these metals for the first time are invited to take advantage of INCO technical assistance. Write to:

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street
New York, N.Y.

INCO NICKEL ALLOYS

MONEL • "K" MONEL • "S" MONEL • "R" MONEL • "KR" MONEL • INCONEL • "Z" NICKEL • NICKEL
Sheet...Strip...Rod...Tubing...Wire...Castings

A-1-j, or higher, are no longer automatically exempted from restrictions on the use of lead.

Other Price Actions

Regulation 230 revises price ceilings for re-usable iron and steel pipe. . . . Amendment 2 to Regulation 202 sets ceilings for four new ranges of brass and bronze alloy ingot and increases the impurities limitations of two others. . . . Regulation 313 sets ceilings as much as 25% below prevailing levels on prime grade hardwood logs. . . . Ceiling prices on less than carload lots of powdered skim milk and buttermilk are set from 1/4¢ to 1¢ a lb. higher than full carload prices by Amendment 2 to Regulation 289. . . . Maximum prices for country shippers of early and midseason dry onions are established by Amendment 3 to Regulation 271. . . . Amendment 1 to Temporary Regulation 23 sets a ceiling of 21¢ a lb. on peanut butter sold to the Agricultural Marketing Administration for lend-lease and school lunch needs. . . . The ceiling for salted lake herring is raised 75¢ per 100-lb. barrel at the first processor's level and an additional 25¢ at the second processor's level by Amendment 100 to Supplementary Regulation 14. . . . Certain specified types of waxed paper—about 65% of the country's total output—are brought under dollar-and-cents ceilings by Regulation 307. . . . The application of Regulations 300 and 301 to specified rubber drug sundries is postponed to March 1.



TELE
WEBSTER ELECTRIC
Teletalk
REG. U.S. PAT. OFFICE

Gives You Time

... and Graybar will show you
how it can be done

Teletalk enables you to control time. Experienced Graybar engineers will make a Teletalk "speed-up" study of your office and plant to show you how to make the most efficient use of your time with Teletalk Inter-Communication and Paging Systems.

Teletalk affords great flexibility, high fidelity voice reproduction, easy installation, and absolute freedom from line interference.

There are models to fit every size and type of business—individual units with capacities from 5 to 24 stations, with or without busy signals, annunciators and other features.

Graybar Houses are located in every key city in the country. Call your local Graybar House today for a Teletalk "speed-up" study.

Graybar Electric Company, Inc.
Graybar Building, New York City

Offices in Over 80
Principal Cities



LABOR

Ripple in a Pool

WMC's work-or-fight order dredged up fewer than 100,000 in nonessential occupations for war jobs.

The work-or-fight order of the War Manpower Commission, telling employees in 38 industries and 29 occupations to get into essential work or face Army induction by May 1 regardless of family status (BW—Feb. 6 '43, p. 14), proved to be only a five-day sensation. By this week, as reports on its effect over the country were assembled, it assumed perspective as a small ripple in the big manpower pool that was the target of the WMC order.

• **Results Summarized**—In essence, the order achieved near panic in New York City where there are already more applicants for war jobs than there are jobs to be filled, a marked increase in U. S. Employment Service registrations (see cover) in such cities as Philadelphia, Boston, and Washington where labor supply problems have not yet become acute, and nothing much more than a few telephone calls to USES offices in centers like San Francisco, Detroit, Cleveland, and Buffalo where labor has been scarce and precious for months.

Even in New York City, which may be considered the capital of many of the industries listed by WMC as non-

essential, the excitement faded quickly. The day after the order was publicized, 30,000 draft-age men stormed into USES offices pleading to be placed in war jobs. The second day, 19,000 registered; the third day, 15,000. Five days after the order was out, New York City USES offices were back to registering their normal 8,000 a day.

• **Unofficial Estimate**—No official figure is yet available on how many men were dredged up, but one estimate places the number at "less than 100,000." It is certain, however, that the great majority of the new group seeking war work placement are located in places where there are few unfilled war jobs that do not require special skills.

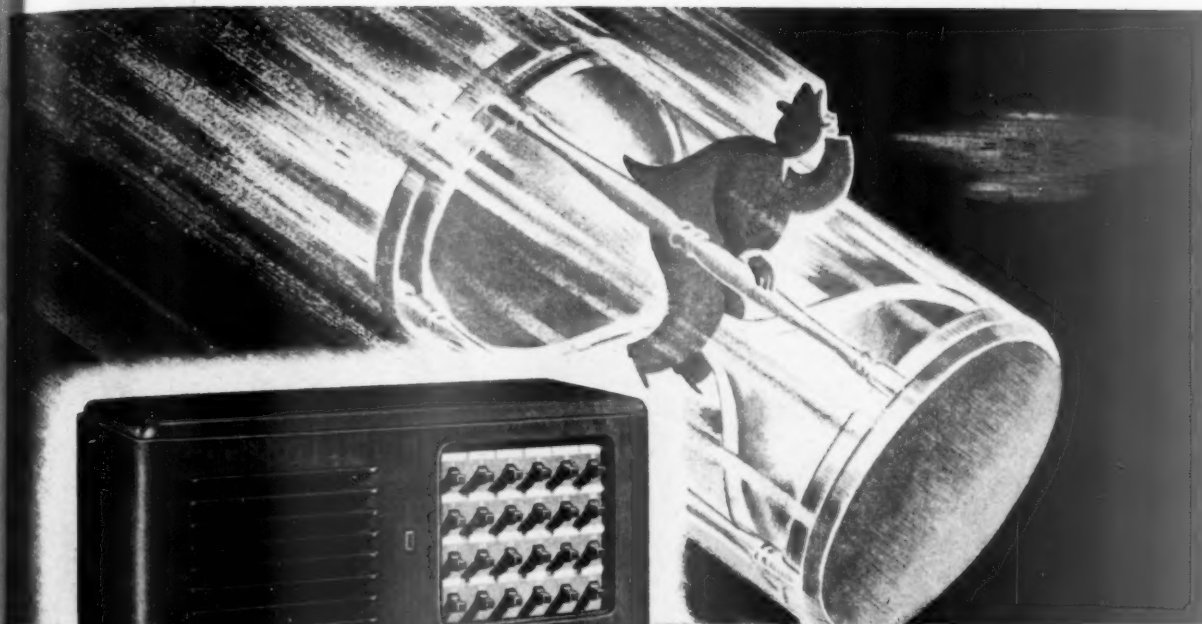
Perhaps the most important consequence of the order in terms of the national manpower problem was to raise again, in sharper form, the question of what to do about moving surplus labor to shortage areas. The drastic implications of the order serve to cut away some of the inertia holding back the movement of workers from home communities when these communities are too remote from war plants. But housing and transport have been the real barriers to surplus labor locating where plants can utilize it, and WMC has been unable to solve that problem.

As if these factors were not enough to minimize the practical effect of the work-or-fight order in easing the manpower pinch, much of its edge was taken off by an immediate congressional reaction and by Selective Service's re-



Certificates of availability are needed by job changers or out-of-towners to get work in Cleveland, one of the areas where War Manpower Commission job stabilization plan is in opera-

tion. Appearing at Cleveland's U. S. Employment Service office, John Skorma of Uniontown, Pa., with chin in hand, explains to clerks why he has wandered so far from home for work.



ARE YOU RIDING *Time* ... OR IS TIME RIDING YOU?

Have you ever asked yourself, "Am I in the saddle and riding Time, or is Time riding me?" Here are three questions to test your use of Time.

1. Do you often wait several minutes to reach the individual to whom you want to talk?
2. Do you leave your desk to consult with your assistants and to secure information?
3. Do you and your executives spend five or ten minutes assembling for a conference?

Teletalk Inter-Communication and Paging Systems save wasted steps, energy and time by placing the farthest corner of your office and factory at your elbow . . . reduce errors, and increase inter-department coordination . . . make it possible to hold a conference with any or all of your department heads, without leaving your desk . . . and, while in conference, get needed facts from any part of the office or factory.

Teletalk is surprisingly low in cost. Built for every purpose and every purse. From 5 to 24 stations . . . Beautifully styled . . . Can be supplied with or without busy signals, annunciators, and headsets for confidential conversation.

Climb in the saddle and ride Time. Call in the Teletalk representative nearest you and have him study your requirements. He can tell you what priority rating you need. Teletalk is listed in your classified telephone directory as shown below.

WEBSTER ELECTRIC COMPANY, Racine, Wis., U. S. A.
Established 1909. Export Department: 100 Varick St., N. Y. C.
Cable Address: "ARLAB" New York City

Licensed under U. S. Patents of Western Electric Company, Incorporated, and American Telephone and Telegraph Company.

WEBSTER ELECTRIC

Electronic inter-communication paging and sound distribution systems for offices, stores, factories, buildings, institutions, homes and farms.

"WHERE TO BUY IT"
GRAYBAR ELECTRIC CO., INC.
 112 11th St. DES MOINES 3-8614

WEBSTER ELECTRIC

Teletalk

TELEPHONE OFFICE

WEBSTER ELECTRIC

"Where Quality is a Responsibility and Fair Dealing an Obligation"

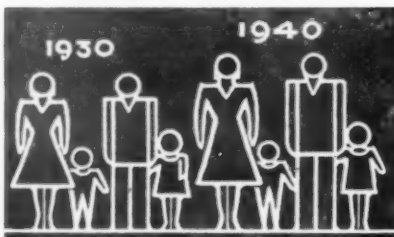
POST-WAR HOUSING

More people to house in 1950

According to National Resources Committee estimates, that portion of the U.S. population which does most of the home-buying and home-renting (between the ages of 25 and 44) will reach 44,379,000 in 1950. That is an increase of 11.7% over the 25-to-44 population counted in the 1940 census.

In addition, the number of families is rising faster than the number of people. Reason: the average size of the U.S. family is declining.

More people in family-forming age groups—and more families—mean greater need than ever before for housing. Hitherto, we have not provided enough minimum-standard dwellings to meet the need. This time we shall meet the need—because of *engineered housing*, which produces better homes for less money.



Engineered housing

Outstanding example of engineered housing is Homasote Company's Precision-Built Construction. This is decentralized prefabrication developed over seven years—at a research cost of \$300,000... Note "decentralized"—Homasote avoids uneconomical transportation costs by franchising local prefabricators to use its system. Thus it works with and for, not against, established local factors in building... Second advantage is *flexibility*. Homasote Precision-Built Construction builds all sizes, all styles of houses—from bungalows to large homes anywhere. Every Homasote Home may be demountable (providing *movability* if neighborhood deteriorates, *expansibility* if family grows).



Proved in \$6,000,000 worth of private homes and \$24,000,000 worth of government war housing, Homasote Precision-Built Construction will open up new, post-emergency markets: low-cost housing, employee housing, realty developments in all price classes, etc.

For more details, write
HOMASOTE COMPANY, Trenton, New Jersey

HOMASOTE
Precision-Built
HOMES

iteration of the obvious fact that, in spite of Washington directives, a civilian's relation to the armed forces was a matter exclusively for his draft board.

• **Legislation Seen**—Polls of congressional opinion indicated that legislation would result, further negating the order's intent by writing amendments into the Selective Service law that would provide deferments for men with dependents.

A bill to this effect is ticketed for quick action in the House. It would provide that before married men with children can be called up, all available childless married men in the state must have been inducted. And before married men are called, the state pool of available unmarried men must have been exhausted.

• **Enthusiasm Dimmed**—With its work-or-fight policy thus buffeted from all sides, WMC can be expected to carry out its intention of supplementing the nonessential industry list and establishing intermediate classifications with something less than great enthusiasm.

Meanwhile, the extension of control over industrial placements in tight labor markets, which was announced by WMC after it became apparent that the work-or-fight pronouncement wasn't going to accomplish miracles, simply marks the broadening of already established WMC policies. These policies provide wide latitude and substantial powers for local WMC officials. While the application of the job stabilization plans will differ widely from area to area, depending on local conditions, all of them will conform in:

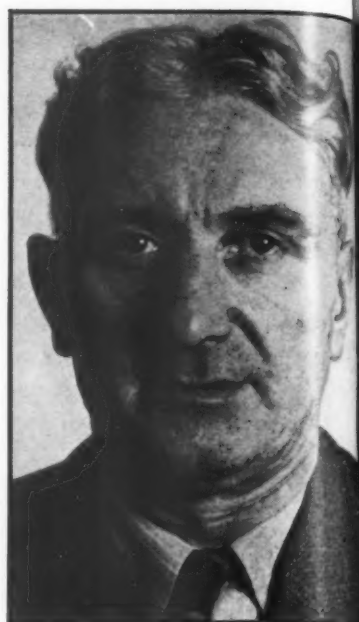
(1) Seeing that workers are referred to jobs which will utilize their skills most effectively in the war effort.

(2) Giving priority on available labor to employers engaged in essential activities.

(3) Limiting an employer's right to hire workers who have recently been employed in other essential work.

• **Extending Freeze**—Applying immediately in the following cities, the job stabilization program will involve practically all manufacturing firms and most sizable nonmanufacturing employers (asterisks indicate areas in which employment stabilization plans are already in operation):

Akron, Ohio*; Baltimore, Md.*; Bath, Me.; Beaumont, Tex.; Bridgeport, Conn.; Brunswick, Ga.; Buffalo, N. Y.*; Charleston, S. C.; Cheyenne, Wyo.; Dayton, Ohio*; Detroit, Mich.*; Elkton, Md.*; Hampton Roads, Va.; Hartford, Conn.; Las Vegas, Nev.*; Macon, Ga.; Manitowoc, Wis.; Mobile, Ala.*; New Britain, Conn.; Ogden, Utah; Panama City, Fla.; Pascagoula, Miss.; Portland, Ore.; Portsmouth, N. H.; San Diego, Calif.*; Seattle, Wash.; Somerville, N. J.; Springfield, Mass.; Sterling, Ill.; Washington, D. C.; Waterbury, Conn.; Wichita, Kan.



For the first time in his 13 years as financial secretary and czar of boilermakers' local in Portland, Ore., Tommy Ray comes to grips with revolt.

Portland Revolt

Tommy Ray's control of local menaced by rebellion of rank and file against handling of boilermakers' affairs.

Internal ructions threatened this week to relax the grip of Tommy Ray on the fabulous Portland (Ore.) Local 72 of the A.F.L. Boilermakers' Union. A series of explosions, touched off by the election overthrow of his fellow officer (BW-Jan. 16 '43, p. 73), culminated in a rank-and-file siege of the A.F.L. labor temple and a burst of courtroom pyrotechnics.

• **Stoppage Feared**—Chief public concern over the uprising against the veteran financial secretary lay in the possibility of work interruption at the Kaiser Portland shipyards, which are dependent upon Local 72 for their supply of labor.

The insurgents were said to have gathered 6,000 signatures to a pledge circulated at the Swan Island yard refusing to pay dues (\$3.50 a month) until Ray has rendered an accounting of funds and the new officers are installed.

• **Trump Card**—Ray countered with a threat to invoke the closed-shop clause of his labor contracts by demanding that Kaiser discharge all dues delinquents. That such wholesale disciplinary steps would precipitate a work

NOTHING MECHANICAL IS IMPOSSIBLE



That's a challenging statement, but our experience has proved it true. We've tackled jobs which some experts had declared impossible yet we accomplished the desired results... jobs involving single mechanical parts and also complete assemblies. We did the impossible.

Long before Pearl Harbor we amazed many manufacturers by reducing the number of parts in their assemblies; doing tooling which made inventors' dreams realities; straightened out and speeded production through ingenuity.

Right now we're producing aircraft armament devices 24 hours a day, seven days a week—precision work of the highest type—automatic bomb-release racks and shackles. And we're delivering them on time with a remarkably low percentage of rejections... that's Spriesch miracle war production.

After Victory we'll be able to help you—whether you be the executive of a large plant seeking an idea for putting into production a small mechanical part or a complete assembly; whether you are seeking an establishment with complete facilities for ingenious manufacture; whether you wish someone to develop and supply needed tools.

We invite you to study our plant and our spirit. We are confident we can help you, no matter where your plant is located. Write us (on your business letter-head, please) for our 36-page brochure "Ingenuity."

Joseph J. Cheney
President



WE OFFER INGENUITY...

and extensive facilities to produce intricate or simple designs—experimental pieces or mass production—complete assemblies or parts with maximum accuracy, minimum waste at reasonable cost.

★ ★ AFTER VICTORY ★ ★

Spriesch

ESTABLISHED 1923

TOOL & MANUFACTURING CO., Inc.

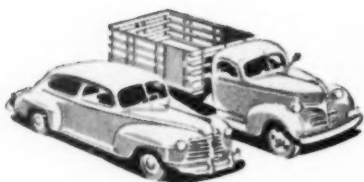
19 HOWARD STREET • BUFFALO, NEW YORK

THE FACTORIES SERVE
with War Materials
Production



THE DEALERS SERVE
with Car and Truck
Maintenance

Your car was built to GO!



YOUR car or truck is the result of 40 years of continuous engineering development. It was built to be driven hard and often.

Under today's curtailed driving, "still" wear (caused by idleness or short runs) is apt to rob batteries of their power—tires of their maxi-

mum life—oils of their lubricating qualities.

Available to you are Plymouth, Dodge, De Soto and Chrysler dealers' service facilities and "know-how"—so important to the protection of your car or truck under today's driving conditions.

For factory-engineered and inspected parts and accessories, see a nearby Plymouth, Dodge, De Soto or Chrysler dealer. For Dodge Truck parts, see a nearby Dodge dealer.

PLYMOUTH DODGE
DESOTO CHRYSLER
DODGE Job-Rated TRUCKS
DIVISIONS OF CHRYSLER CORPORATION

BUY U. S. WAR BONDS AND STAMPS

stoppage seemed a foregone conclusion. On the other hand, a strike—or even the threat of one—would bring the National War Labor Board into a picture already complicated by the presence of the National Labor Relations Board (BW—Jan. 16 '43, p. 80). NLRB, at the instigation of the C.I.O., is investigating Kaiser's A.F.L. contracts over the outspoken protests of Kaiser attorneys. Should NWLB assume jurisdiction, the NLRB probe likely would suffer a setback.

• **Wartime Jackpot—Membership** of Local 72 has grown in the past two years from 500 to 65,000, because all Kaiser workers must join. In that period Ray has collected close to \$3,000,000 in initiation fees (\$20 to \$30), dues, and fines, but given no accounting to the members. This turned out to be a major issue in the Local 72 election last month in which all Ray's hand-picked candidates were defeated. Ray's job alone was not at stake.

First thunderclouds of the present storm gathered last week when President-elect A. E. Jordan and Treasurer-elect John Bigot filed mandamus proceedings to oust the defeated officers. Without ruling on the merits of the case, Circuit Judge James W. Crawford turned them away until they have exhausted all possible internal remedies.

• **Injunction Asked**—At the same time, however, Russell W. Duke, a rank-and-filer, sought an injunction to restrain the defeated officers, as well as executives of the Boilermakers' International Union, from "meddling" in affairs of the local, and from ordering or permitting removal of the union's records from the court's jurisdiction during pendency of the suit.

Local union insurgents, meanwhile, stormed the doors of the labor temple and smashed them from their hinges when officials refused to permit use of the temple for a mass meeting.

Considerable national attention already has come to Tommy Ray because he conceived and constructed the \$250,000 "boilermakers' palace," headquarters of the local in Portland, with its swanky bar closed to rank-and-file members and used only for "special parties." To most of the 65,000 members who pay \$3.50 monthly dues, Tommy Ray is only a name and an unseen power.

• **Stockyard Worker**—Tommy enjoys his position and his eyes squint into a grin as he talks about it. He hasn't forgotten that he was born south of the Chicago stockyards and went to work there for \$3 a week when he was 15. In those years Tommy "got unionism." While he was on his stockyards job, Negroes were brought in to break a strike, and it was there that he got his aversion to placing Negroes on a job—an attitude that has caused him to keep Negroes out of Local 72.

In 1909 young Tommy beat his way



What did *you* do today ... for Freedom?

Today, at the front, he died . . . Today, what did *you* do?
Next time you see a list of dead and wounded, ask yourself:

"What have *I* done today for freedom?

What can I do tomorrow that will *save* the lives of
men like this and help them win the war?"

To help you to do your share, the Government has organized the Citizens Service Corps as a part of local Defense Councils, with some war task or responsibility for every man, woman and child. Probably such a Corps is already at work in your community. If not, help to start one. A free booklet available through this magazine will tell you what to do and how to do it. Go into action today, and get the satisfaction of doing a needed war job well!

EVERY CIVILIAN A FIGHTER

CONTRIBUTED BY THE MAGAZINE PUBLISHERS OF AMERICA.

Be sure with FLUOR

**DESIGNERS • ENGINEERS
CONSTRUCTORS**
*to the oil, gas and
allied industries*



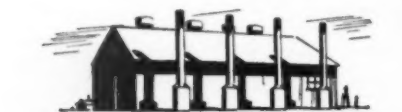
FLUOR COOLING TOWERS

Fluor manufactures both Atmospheric Aerator Type and Mechanical Draft Type Cooling Towers for process water cooling, in any quantity, in any service. Both types of towers embody soundest principles of design, highest thermal efficiencies and quality construction. Ask for Bulletin.



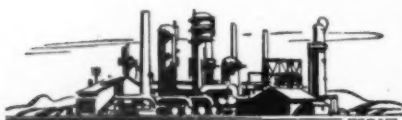
FLUOR GAS CLEANERS

Fluor now announces a new line of high efficiency Gas Cleaners for the removal of entrained liquids and solids from gas and vapor streams. Designed and built in three models for a wide range of operating pressures and capacities. Ask for Bulletin.



FLUOR AIR-COOLED MUFFLERS

Fluor Air-Cooled Mufflers, for large internal combustion engine exhaust lines, use air instead of water for their cooling agent, thereby achieving new economies in muffler operation and maintenance, greater safety to personnel, and quietest operation. Available in both overhead and bottom exhaust types. Ask for Bulletin.



Fluor Engineering and Construction

Fluor offers to the oil, gas, and allied industries a complete designing, engineering, fabrication and construction service—from plan to plant. Fluor builds synthetic rubber, toluene, aviation gasoline, alkylation, isomerization, recycling, natural gasoline and gas transmission plants and petroleum refineries. Ask for Bulletin.



THE FLUOR CORPORATION LTD.

2500 S. Atlantic Blvd., Los Angeles, Calif.
NEW YORK • PITTSBURGH • KANSAS CITY • HOUSTON

to the Pacific Coast and landed in Seattle, where for two years he worked in the streetcar barns and then hired out at Hefferman's drydock, heating rivets for \$2.75 a day. It was then he became affiliated with the boilermakers.

• **Sturdy Picket**—Then followed vagabonding all over the West, some time at sea, and then to Tulsa, Okla., where he made \$12 a day building oil tanks. Ten thousand tank builders went on strike in midwinter, and Tommy stayed on picket duty in two feet of snow.

A few years later Tommy tried his hand at farming. He bought 46½ acres, 16 cows, 50 hogs, 300 chickens.

• **Elected in 1930**—The farming lasted two years, and then Ray hired out on a series of construction jobs. Then came the climactic phase of his hectic career:

"In 1930 some of the boys nominated me as business agent. I was working in Eugene (about 125 miles from Portland) and did no campaigning—didn't talk to a single member. I arrived in town five minutes before the meeting, and got a 3-to-1 vote.

"And there I was, a \$150-a-month clerk, running the office alone for five years—collecting dues, keeping the books, and doing all the chores."

• **Ray Will Hang On**—Now, he likes to point out, he is head of "the biggest union local in the A.F.L.," custodian of the local's money—and he gets a salary of \$200 a week plus expenses. And Portlanders have no doubt that he intends to hang on to his job despite the current insurrection.

INSURANCE MEN ORGANIZED

C.I.O.'s United Office and Professional Workers of America has a new record to crow about: the largest union contract ever signed covering white-collar employees. It was negotiated by the union on behalf of 18,000 industrial insurance agents employed by Prudential Insurance Co. of America in all states except Wisconsin, Ohio, and Minnesota where collective bargaining polls remain to be held.

Among other things, the agreement provides for \$2.50-a-week wage increases—subject to National War Labor Board approval—paid vacations, maintenance of membership, voluntary checkoff of union dues, grievance machinery, and arbitration of disputes.

Importance of the new contract lies not so much in the number of workers covered, or in the fact that it adds substantially to U.O.P.W.A.'s membership which now is reported as 50,000. Real consequence is that it gives a significant fillip to the white collar organizing campaign, particularly in the insurance field. A dispute between U.O.P.W.A. and Metropolitan Life Insurance Co. now is pending before NWLB, and unionizing drives are in progress in a number of other leading insurance companies.

Guaranteed Work

Chicago electrical group campaigns for maintenance men of other trades under a plan that has worked before.

Most of Chicago's newspaper readers who waded through the quarter-page advertisements of the Electrical Maintenance Trustees this week probably wondered what it was all about. The group urged men in the building trades union to shift to maintenance jobs for the duration.

• **Many Wives Answered**—But the 20 odd carpenters, steamfitters, bricklayers and plumbers who swamped the E.I.T. office with inquiries, after two inspections, apparently regarded the invitation hopefully. About a third of the response came from wives who are weary of prolonged unemployment between paychecks; the promise of 300 days' work per year was in sharp contrast to the construction worker's 178-day average.

Few inquiries came from union electricians because most of them recognized in the ads the stabilization the industry has had for twelve years under the E.I.T. The depression-born plan consists of a board of four representatives from the Chicago Electrical Contractors' Assn. and one from Local 134 of the A.F.L. International Brotherhood of Electrical Workers.

• **Advantages for Workers**—Back in 1930, when electricians were taking any kind of job and letting union cards lapse, the E.I.T. was organized to hold a reserve of trained workers against the day when building would pick up. The organization provides group life and disability insurance for members' employees, maintains an employment service, lends money to workers, and maintains a pension system.

In return, Local 134 made an agreement with the association to lower wage scales to permit union men to take lower-paid maintenance jobs. The plan was so successful that by 1937 the association had enough workers to handle building's upswing.

• **The Problem Returns**—According to the E.I.T., four times as many men could have been placed in maintenance jobs during the depression if other building trades had established similar plans. Employers were reluctant to hire construction electricians while other tradesmen were not working on the same basis.

With electrical installation permits in Chicago down from 1941's monthly average of 5,000 to 1,866 last month and with the construction picture growing darker, E.I.T. sees a return of the old problem. Result is the advertising campaign.

MARKETING

Co-ops Win Air

Cooperative League buys time from 30 radio stations after a major skirmish with big networks.

Since its beginning in the United States, the Cooperative movement has fought such stigmas as radicalism and communism, has sought recognition as a \$700,000,000 a year business rather than a political ideology. Now the Cooperative League of the U.S.A. is ready to launch a series of coast-to-coast Sunday afternoon radio programs, significant chiefly because in allowing subsidiary stations to sell time to the co-ops, the major radio networks indicate acceptance of Co-ops' economic rather than political status.

● **Refused Last Fall**—Only last fall the league—trade association for some 23,000 cooperatives—scheduled on 30 stations a recorded program ("Let's Get Together, Neighbor") that never went on the air (BW—Oct.17'42,p78). Reason was that stations owned and operated by the National Broadcasting Co. and the Columbia Broadcasting System turned down the co-ops in accordance with network policy of refusing to sell time devoted to "public controversial issues."

Needled by Federal Communications Commission inquiries and a disturbing volume of letters from co-op members, the networks reconsidered and sold time



A new kind of historical drama—portraying the postwar world—goes on the air this week, sponsored by the Cooperative League. Script is in the hands of Author Gerald Kean, J. Dennis Molnar of Atherton & Currier (advertising executive for the show), and Clinton Johnston of the Radio Director's Guild.

to the league. Not, however, without imposing a reservation forbidding membership solicitation on the program.

Most of the stations which will air transcriptions of the co-op show ("Here is Tomorrow") are small independents, but the league needed the prestige of network approval—at least for some member stations—before spots on smaller stations were signed. More than that, co-op leaders hope this is only the beginning, are planning bigger broadcasts for the future, and consider that having been heard over NBC and CBS affiliates they have a precedent for time on the networks themselves.

● **Oratory Assured**—The present series, to be heard weekly (beginning Feb. 14) over 30 stations, tackles dramatization of the postwar world, a thing no other program has attempted in other than the Orson Welles manner. Programs are concerned with the future of such down-to-earth questions as food, housing, medicine, clothing, industry, agriculture, education, and culture. Food Distribution Director Roy Hendrickson, Architect Frank Lloyd Wright, Charles Eliot of the National Resources Planning Board, ex-Senator George Norris, and Sen. George D. Aiken are among the speakers scheduled.

Policy of the series is to avoid claims that opportunities of the postwar world can be grasped only by the cooperative method. Advantages of what members call their "idea with handles on it" for achieving security without taking a dictator or an "ism" along with it presumably will be apparent when attention is given to postwar problems and opportunities.

● **Petrillo Sidestepped**—Even after major problems of launching the co-op's radio career were solved, producers ran into mechanical snags, chiefly the problem of James C. Petrillo (BW—Jan.24'43,p28). With musicians forbidden to record music, and with previously recorded music inappropriate for the wave of the future, Director Clinton Johnston found a vocal sextet to solve his problems. This group will simulate cue music as well as background effects of instrumental music.

BIG FOOD DRIVE PLANNED

To attack 1943's problems of food production and distribution, the potent Grocery Manufacturers Assn. is cooking up a nation-wide, coordinated, advertising campaign to an Office of War Information recipe. All branches of the food industry and their advertising agencies are being enlisted in what promises to be an unprecedented drive.

The industry will aim its promotion

BREEZE SHIELDING GUARDS VITAL RADIO COMMUNICATION AGAINST INTERFERENCE



25 MILES —on a Still Night

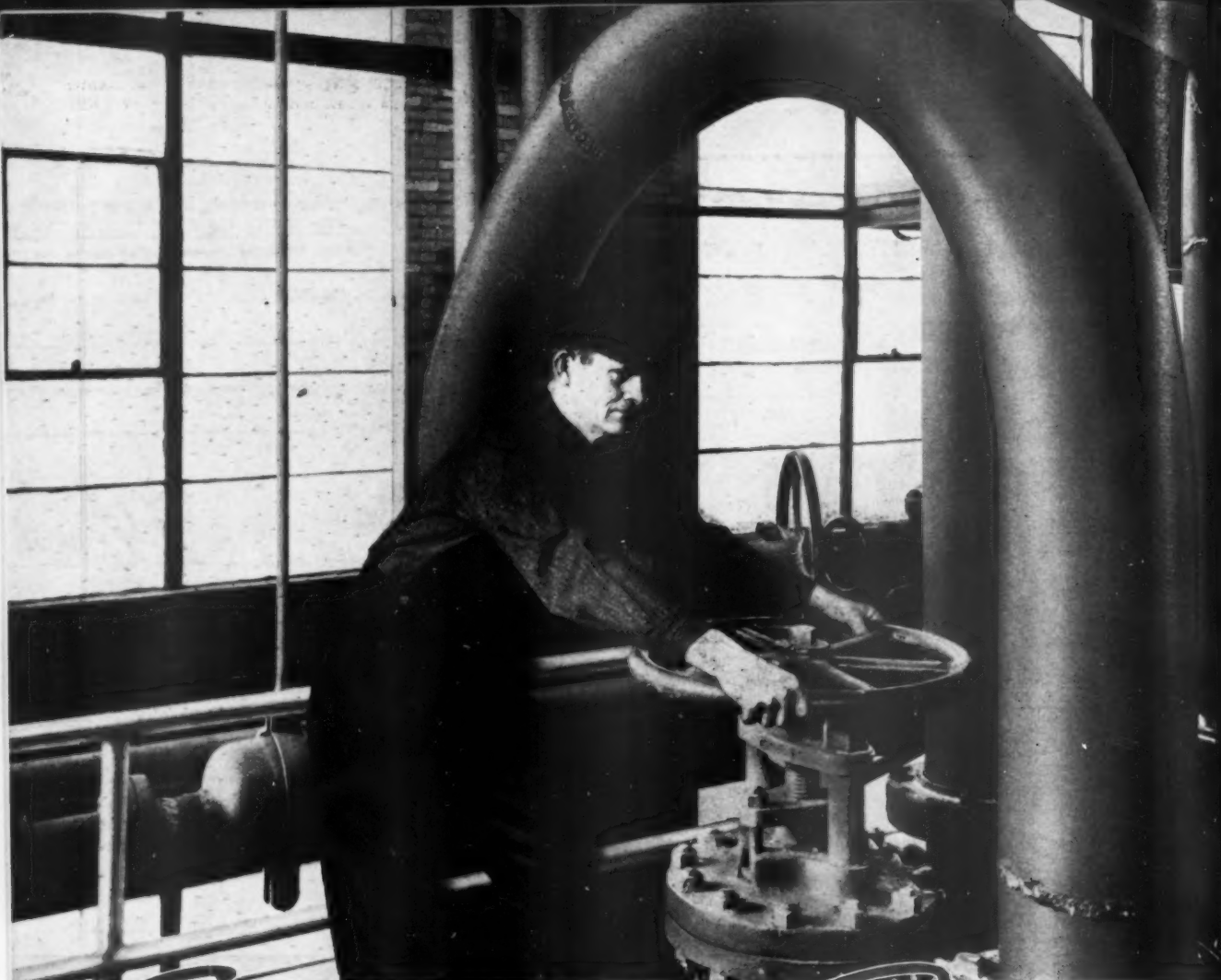
Huge African signal drums can roll their code messages across 25 miles of jungle on a still night—but they are ineffective in the face of thunder, high winds, or heavy rains.

Modern radio communication too has problems of natural interference—static caused by the absorption or radiation of high frequency impulses. Breeze Radio Ignition Shielding, pioneered and developed by Breeze, effectively guards against such interference, makes possible clear and dependable transmission and reception of messages. Flexible Shielding Conduit is manufactured in a variety of types and materials in accordance with specifications of the Government Services, while a wide range of sizes permits a selection to meet practically every shielding requirement.

Through its years of experience in the field, Breeze has acquired the engineering and production know-how to solve specialized shielding problems of all kinds.



BREEZE CORPORATIONS, INC.
NEWARK, NEW JERSEY



Smooth-flowing Production

THROUGH TECHNICAL TEAMWORK

From flow sheets to efficient production facilities, the Austin Organization is working shoulder to shoulder with industry in the "All-out" effort.

From the taking of raw materials out of the ground to the rolling of equipment up to the battle fronts, technical teamwork is co-ordinating many diversified efforts to speed results.

"Industry-at-War" is benefiting also by many new processes and new materials, as the result of technical teamwork. To employ

these new processes and produce the new materials on a practical basis in unprecedented volume, smooth-flowing plant facilities had to be created with record-breaking speed in many instances.

OPEN-MINDED APPROACH—In the case of some projects handled by Austin, downright pioneering has come into play. Old methods have been tossed aside. And the blazing of new trails has resulted in new, smooth-flowing facilities which, although complex and highly specialized in design, are practical to the Nth degree.



A project in which critical materials have been conserved... A Pre-stressed Concrete Tank of 1,500,000 gallon capacity... as constructed by Austin for chemical, oil and other industries.

In the chemical and process industries, where technical teamwork reaches peak performance, the Austin Organization, starting from flow sheets, has frequently supplemented an Owner's technical staff with a completely co-ordinated engineering and construction service . . . over-all result, plant facilities and process become a mammoth, smooth-flowing machine.

DOUBLE-BARRELED OPPORTUNITY—War construction must come first and Austin's Coast to Coast Organizations provide a convenient network for quick action. To long-range planners, Austin Engineers can offer helpful suggestions and ideas to meet, not only today's abnormal demands, but those of a greatly changed peacetime as well. Regardless of the type, size and location of needed plant facilities, simply contact the nearest Austin Office.

Projects in the process industries, because of their complex character, require specialized experience and the co-ordination of diversified technical effort. Austin's long experience in serving industry with a co-ordinated engineering and construction service has been helpful in these specialized fields by providing greatly increased capacity quickly.



Modern, daylight Turret Division Plant of The Emerson Electric Manufacturing Company with its streamlined exterior is matched by smooth-flowing production lines inside the plant. Design and construction by Austin.

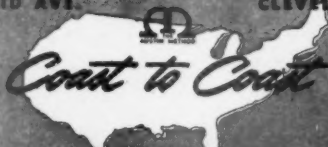
Raw materials are where you find them . . . usually in isolated locations. Projects handled by Austin Engineers include plant facilities for producers of raw materials that are highly essential in the war effort, such as magnesium, iron ore and aluminum.



THE AUSTIN COMPANY . . . DESIGNERS, ENGINEERS AND BUILDERS

16112 EUCLID AVE.

CLEVELAND, OHIO



NEW YORK . . . 19 Rector Street, Whitehall 4-6393
 PHILADELPHIA . . . 1802 Girard St. Bldg., Rittenhouse 8670
 PITTSBURGH . . . 332 Union Trust Bldg., Atlantic 3877
 CLEVELAND . . . 16112 Euclid Avenue, Glenville 5400
 CHICAGO . . . 2842 West Grand Blvd., Madison 8874
 ST. LOUIS . . . 208 Hume-Massor Bldg., Riley 1082
 INDIANAPOLIS . . . 510 N. Dearborn Street, Superior 6100

ST. LOUIS . . . 1198 Arcade Building, Main 1058
 HOUSTON . . . 1616 Second Nat'l Bank Bldg., Capitol 1676
 SEATTLE . . . 877 Dexter-Horton Bldg., Elliott 5450
 OAKLAND . . . 1924 Broadway, Highgate 3423
 LOS ANGELES . . . 777 E. Washington St., Richmond 2231
 The Austin Company, Limited, TORONTO, CANADA,
 "Metropolitan Bldg., Bldg 1615

WASHINGTON, D. C.

1150 Farr Bldg., Republic 3438



Paper, too, Plays its Part in BUILDING for the FUTURE

With E-Award efficiency, Sylvania Electric Products, Inc. is producing for war...planning for peace. Its magic devices in radio and electronics...so essential today in the handling of planes, submarines, warships and mobile land units...will play an even more vital part in our post-war world.

To tell their dramatic story to employees, to customers and contacts, Sylvania relies on the *quality* of Strathmore Papers: Strathmore Fiesta for their Army-Navy "E" Award announcement; Strathmore Alexandra Brilliant for the Company letterhead.

Your letterhead is a salesman of *your* business...present and future. Be sure of its quality. A letter written on Strathmore Paper costs only a small percent more than a letter written on the cheapest paper you might buy. Such plus value for so little cost difference, is sound business judgment. Write us for detail of "letter" cost.

Strathmore Papers for Letterheads: Strathmore Parchment, Thistlemark Bond, Bay Path Bond, Strathmore Bond, Strathmore Script, Alexandra Brilliant and Strathmore Writing.

STRATHMORE

MAKERS
OF FINE
PAPERS

Strathmore Paper Company, West Springfield, Massachusetts

at six OWI campaigns in force or in blueprints, as follows: (1) farm production goals; (2) victory garden promotion; (3) point rationing explanation; (4) agricultural labor procurement; (5) nutrition and food conservation details; (6) explanations of the entire food picture.

To get the promotion under way the association has begun circulating OWI campaign plans among its members (80% of the industry), nonmembers, and 500 agencies handling food accounts. The Advertising Council is handling OWI's interests and much of the planning work.

Behind the decision to enlist the industry's aid was its success last year in nutritional education to which producers and advertisers contributed much valuable space and air time.

Furniture Swaps

Dealers find that informal trading among themselves is a big help in keeping stocks somewhere near normal.

When the Chicago Retail Furniture Assn. last November organized its Trading Post along lines similar to that of the Cook County Electrical Contractors Assn. (BW-Dec.12'42,p66), members gleefully hailed the idea of balancing their inventories by swapping surplus stocks, but quickly abandoned the association's orderly trading channels in favor of informal bargaining between friends. Results: The boys are bringing their lopsided inventories more nearly into balance, and they're having a lot of fun arguing how many kitchen cabinets equal one inner-spring mattress. • **How the Swaps Are Made**—While presumably no dealer is overloaded with war-restricted merchandise, most of them have more than they need of some items and possibly none of others. For example, a dealer may sacrifice a radio in order to get a box spring without which he might lose the sale of an entire bedroom suite.

But all swaps are not made item-for-item. Such critical goods as radios, studio couches, and other upholstered furniture are in greatest demand, while case goods (like dining room suites) are a drug on the market. Three-way trades are common. If Dealer A wants a studio couch out of Dealer B's stock, but Dealer B is interested only in acquiring radios, A may have to scurry around and find Dealer C who is willing to supply a radio to B in return for A's washing machine. All trades are made on the basis of the dealer's cost plus freight.

• **Volume "Considerable"**—There's no way of estimating the volume of goods

changing hands on this informal exchange since no records are kept, but the association describes it as "considerable."

All 130 members—including big chains and little independents—take part in the trading, which is getting increasingly lively as consumers' goods get scarcer.

Future Studied

Automobile Dealers' Assn. Sees Nugent plan and eyes postwar effect of liquidation of Army's motor fleet.

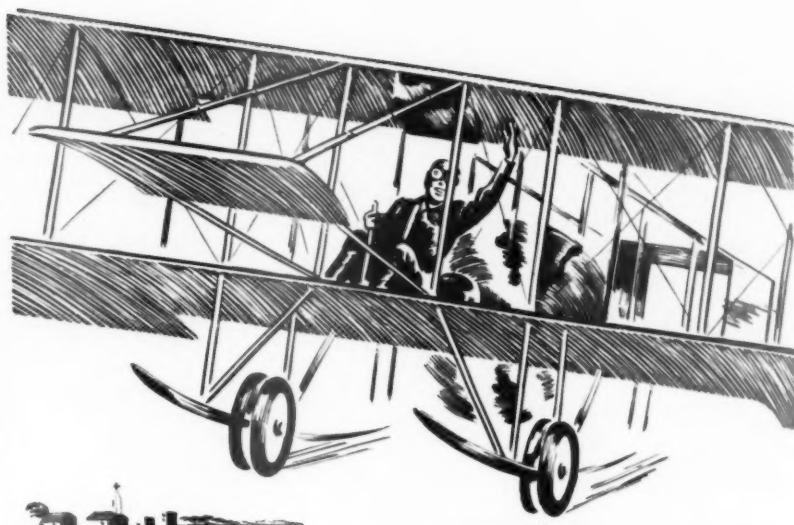
On the many postwar planning committees running full blast throughout the nation, the distributive trades have had practically no representation. Now, however, signs are appearing that the 250,000 wholesalers and retailers are beginning to think about their future, too.

Looking Ahead—So far the National Retail Dry Goods Assn. (department and specialty stores) has announced a postwar committee; the American Retail Federation (representing practically all major retail trade groups) has one in the works; most significant of all, the National Automobile Dealers Assn. has recently empowered a seven-man group to peer into the problems of the future. Importance of the N.A.D.A. setup lies both in N.A.D.A.'s tremendous numerical and political strength (15,000 auto dealers) and in the fact that the postwar committee already has done something tangible: It has turned thumbs down on the Nugent installment-sales-in-reverse plan (BW—Jan. 30 p. 7).

Bureaucracy Scented—After consultation with the Brookings Institution, N.A.D.A.'s planners decided that the Nugent idea would require too many postwar government controls, too much additional bureaucracy. The general N.A.D.A. membership went along with the recommendations of the committee, vetoed a proposal to back Nugent.

Although the seven N.A.D.A. planners (drawn from N.A.D.A. ranks) haven't completed a formal roster of problems yet, they have some samples of what will be tackled. Prominent among early headaches is how the government will market excess military automotive equipment when the war is over. N.A.D.A., of course, doesn't want Uncle Sam to load the peacetime market with jeeps and staff cars unless (1) regular auto dealers are called in, and (2) disposition is controlled so that the market won't suffer.

Keep Sights High—Because most distributors are small (as compared to manufacturers), the distributive trade



Can the war make your food products obsolete?

THE PROBLEMS of supply, packaging, rationing are tough enough. But here is another that every food manufacturer has to face.

Wartime requirements for better nutrition, presented in the National Nutrition Program, put it squarely up to the product to deliver maximum food value. Or else.

If your product is a logical one for vitamin enrichment or fortification, *now is the time to start.*

And if you are or will be in the market for vitamin A, get the facts about what we believe to be the finest vitamin A concentrate obtainable.

Distilled Vitamin A Esters* is the name. This concentrate of vitamin A in the natural Ester form is produced by molecular distillation in high vacuum, a process which gives the resulting concentrate several unique advantages.

Distilled Vitamin A Concentrate in the natural Ester form is scientifically uniform in quality, high in potency, two to ten times more stable in heat, light and air than any other commercial concentrate we have tested. Exceptionally bland, this vitamin A does not impart taste or odor to foods or pharmaceuticals.

Write for our new illustrated brochure, "The Story of Vitamin A Esters." And get complete information and performance data for your technical men.



*Protected by U. S. product patent No. 2,205,925 and more than 50 process patents.

DISTILLATION PRODUCTS, INC.

755 RIDGE ROAD WEST, ROCHESTER, NEW YORK

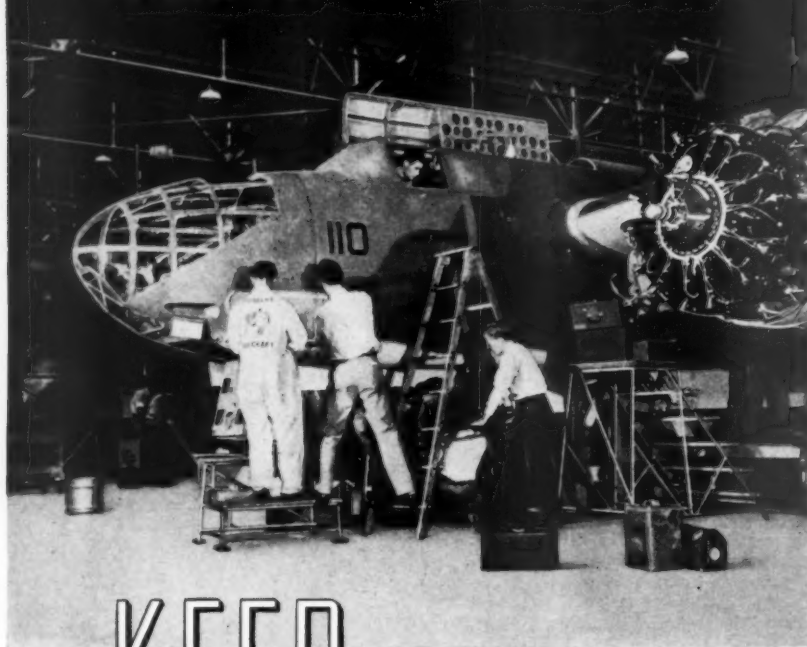
Jointly owned by EASTMAN KODAK CO. and GENERAL MILLS, INC.

Sales Agent:

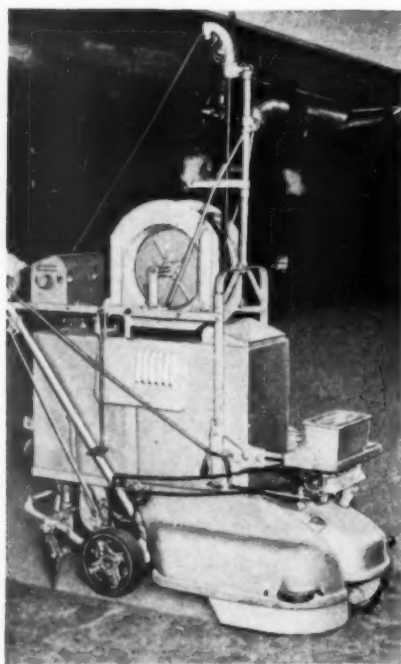
Special Commodities Division, General Mills, Inc., Minneapolis, Minn.

"Oil-Soluble-Vitamin Headquarters"

"KNOW-HOW"



TO KEEP WHITE FLOORS WHITE



USING Minimum Man-Power FOR SCRUBBING

It's really no problem at all with the right equipment . . . with a floor-maintenance machine that's fast enough to make practical the more frequent cleaning that white floors require, in order to maintain the production advantages of reflected light. A *Finnell Combination Scrubber* is the answer. It not only has the extraordinary speed of 8,750 sq. ft. per hour, using the largest size, but requires *just one operator* for the scrubbing, rinsing, and drying operations!

For consultation, free floor survey, or literature, phone or write nearest *Finnell* branch or *Finnell System, Inc.*, 3802 East Street, Elkhart, Indiana.

FINNELL SYSTEM, INC.

Pioneers and Specialists in
FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES
IN ALL
PRINCIPAL
CITIES

associations know only too well that their members are inclined to consider the world in provincial terms. N.A.D.A.'s postwar committee, however, is not supposed to bother with purely local angles, or get tied up with such old sticklers as dealer contracts, commissions, and other personal-finance topics. The idea will be to take a crack only at bigger marketing problems.

In order that the committee will have enough projects to keep it busy, N.A.D.A. members have been notified to write to their nearest committee whenever a worthy problem or suggestion occurs. These the committee will thresh out both by correspondence and personal get-togethers.

RESORT SALES SUBSTITUTE

To anxious retailers wondering what to sell and how to sell it for the duration recently came a solution to at least one of their problems—what to do about their lost resort business. Answer is a single term "Sun-Maker," which not only applies to resort fashions and furniture but also serves as a six-month promotional handle, which will carry right into summer. This saves the January markdown, which usually took most of the profit out of winter resort business anyway.

The merchandising world has the Cohn-Hall-Mark Co. to thank for this ingenious substitute, first applied to that company's entire line of Cohara fabrics for the 1943 season.

SAFeway's MILK PLAN

Pending rationing, Safeway Stores has devised a novel and highly successful plan to assure babies an adequate supply of canned milk in California. The plan performs a good public relations job besides its obvious service function.

Under the system, a customer has his physician write to Safeway's advertising department (1925 E. Vernon Ave., Los Angeles) that milk is needed for a baby. The doctor's note includes the brand of milk preferred and the address of his patient's nearest Safeway store. The milk is then dispatched to that store for delivery to the customer.

The plan violates no government regulations but will be eliminated automatically when rationing assures equitable distribution. It was one answer to complaints to the Los Angeles health department by mothers unable to buy milk.

SINKERS IN THE SWIM

Munitions makers and bomber plants may have started war boom business, but they don't have a corner on it. Prosperity in 1942 extended to virtually all industries that did not lose raw materials.

SALESMEN GROUNDED

It seems there was a traveling salesman. "Was" is the correct word, for gasoline rationing has circumscribed the travels of this hero of the farmhouse legend.

His problem is to condense an annual orbit of 20,000 to 45,000 miles into the limitation of a C card, or about 8,600 miles. The bus and the railroad are absorbing most of the excess mileage. But these forms of travel offer little accommodation for the inevitable simple cases.

Salesmen with lines of dry goods, ready-to-wear, and variety merchandise are meeting this problem—as well as conserving scarce merchandise—by carrying portfolios of photographs and swatches of material to illustrate pattern and color. Shoe salesmen are setting out their 20 or more cases in a central location and inviting retailers to the exhibit.

The itinerant missionaries of the large dry-goods and general-merchandise house used to cover their territories every three or four weeks. Now they go out every five or six weeks, make one trip by automobile with a load of samples, and thereafter travel by train to bus and do their selling from photographs, catalogs, and swatches. A manufacturer of men's hats has equipped his salesmen with virtually a full line of miniatures for convenience in transportation.

supplies to military provision or production.

Illustrative of noncombatant trades making conspicuous expansion was the donut industry, which rolled up sales of \$12,000,000 last year, a 30% increase over 1941's \$85,000,000 business. Despite a shortage of coffee since fall, a companion to the dough-Americans consumed the unprecedented number of 560,000,000 dozen 720,000,000 single sinkers last year. Doughnut vending machines are located on both North African and Australian fronts. Government purchases of individual doughboy sales by Post Canges accounted for \$12,000,000 of sales, reports the Donut Institute, industry's three-year-old trade association. Army sales and greater civilian shortages in other food lines enticed the trade to anticipate further expansion next year.

Doughnuts now rank among the "real foods" recommended by the U. S. Department of Agriculture since they are made of enriched flour.

AMPCO CASE HISTORIES

Non-Magnetic!

Wheel Rims of AMPCO METAL Safeguard Scientific Instruments

—its Toughness Assures Longer Life

Where delicate scientific recording instruments must perform accurately — on the testing cars of American railroads — the non-magnetic properties of Ampco Metal for rims of car wheels assure reliable records. Laboratory tests have determined the non-magnetic values of Ampco Metal. In addition, the great wear-resistant qualities of the bronze give long life and excellent service to the rims. Several repeat orders testify to the satisfactory performance of Ampco Metal under these unusual conditions.

In other industrial applications—in war production services — Ampco Metal has an enviable

record for doing the hard jobs. The high physical properties of the bronze—its great strength and excellent bearing characteristics, make it outstanding as a service bronze. Behind the alloy lie 28 years of experience plus the study of thousands of applications — your assurance of satisfactory performance that confirms your good judgment.

If you have parts that are subject to metal failure, fatigue, and wear, investigate the use of Ampco Metal. This amazing bronze may be the solution of your problem. Ask for "File 41 — Engineering Data Sheets," describing many varied applications.

AMPCO METAL, INC.

DEPARTMENT BW-2

MILWAUKEE, WISCONSIN

AMPCO METAL



THE METAL WITHOUT AN EQUAL

Deep-drawing made it light and strong enough to fly



This cylinder, a reservoir of hydraulic energy for aircraft use, is another example of the way in which the Hackney Deep-Drawing Process helps manufacturers strengthen and reduce the weight of parts simultaneously.

Hydraulic energy to feather propellers, operate landing gear, flaps, etc., requires accumulators which are light in weight, yet are strong enough to withstand high internal pressures.

Hackney engineers co-operating with the accumulator manufacturer developed a cylinder to meet the exacting specifications. Unnecessary weight was eliminated and uniform sidewall thickness was assured by cold drawing. Ample strength was assured by electrically controlled heat-treating.

In addition to successfully meeting the weight-strength requirements, the Hackney Deep-Drawing Process makes important savings in time and materials as no machining is required for weight reduction in producing these improved products.

If you have a problem which deep-drawing might solve, let Hackney's engineers help you. Their experience may enable you to overcome manufacturing difficulties, meet war material limitations or effect product improvements. Write for details.

Pressed Steel Tank Company

General Offices and Factory 1493 SOUTH 66th STREET
Milwaukee, Wisconsin



DEEP-DRAWN
SHAPES AND SHELLS



Shoes Are Tight

Overdue ration controls sets off buying rush in clothing lines and points to leaner days ahead.

When consumers learned of the heralded order rationing three pairs of shoes per person a year, they regarded the edict as confirmation of their fears about civilian supply and as a start of tighter retail controls. Department stores, however, looked at the order to the circumstances which had made it necessary. They shuddered at seeing the same old cycle of shortages and scare buying combining to melt once tight but adequate stocks.

• **A Bogey Arises**—With all department store inventories steadily diminishing under sales pressure, inflationary buying is the big bogey for all merchants. It is on the heels of the shoe order that the bogey reared its head when sudden runs appeared on all kinds of clothing.

To shoe experts, the footwear shortage was long overdue. They began recommending controls last fall (BW—Oct. '42, p13) when stocks were relatively comfortable (between 250,000,000 and 300,000,000 pairs). Rationing with that cushion of stocks existed would have assured a higher per capita allowance.

• **Shoe Crisis Was Feared**—Since then, however, output has fallen approximately 50,000,000 pairs below total year ago, and increased buying probably has cut into inventories even more than production curtailments. With stocks thus reduced in a trade that requires a large inventory, shoe men for themselves in a touch-and-go situation. Consumer runs could have exhausted stocks in a few days had the order been delayed longer.

Price Administrator Prentiss Brown hints that the shoe ration may be reduced. What OPA does depends upon (1) whether consumers buy up total quota of about 375,000,000 pairs a year, and (2) whether military demand for sole leather is reduced enough to boost the year's production quota to 315,000,000 pairs (BW—Nov. 14, p66). The industry's supplies, however, will be reduced by allocation of manufacturer's type sole leather for repair service (page 71).

• **Inventory Index Up**—But this week consumers reconciled themselves to three pairs of shoes a year and continued to speculate—as they have since war began—on further shortages, incomplete stocks, and rumors of complete disappearance of some goods. This is the shopper's saga which has replaced the prewar tales of bargain day triumph.

Such alarmist conversation constitutes

better gossip than factual reporting, for actually stocks at present levels—even after record Christmas sales—are still above last year. Preliminary figure of the Federal Reserve Board index was 96 for the end of 1942, compared with 86 a year ago.

• **Actual Stocks Declining**—However, inventories have declined steadily throughout the year (see table, page 98), and Mr. and Mrs. America are apt to decide by summer that they would just as soon have goods rationed as to find them entirely unavailable. But a panicky public that rushed to stock up on coats and suits the day shoe rationing was announced is apt to let itself in for more coupon buying than would be necessary otherwise.

Meanwhile, retailers are close-mouthed about the supply situation because (1) they don't want scare shortage stories traced to them by OPA, (2) they don't want to stir up buying runs in their own towns, and (3) they are afraid of giving the impression that their particular store is short of merchandise.

• **Wholesale Supplies Tight**—Nevertheless, realistic merchants are aware that the relatively healthy condition of their stocks is at the expense of wholesale inventories. Therefore, they cannot depend on suppliers as formerly. Already wholesalers' salesmen are instructed to refuse blanket orders, limit sales, and reserve final acceptance of orders for the home office.

Retailers' assurances to consumers that all is well and will continue to be isn't reflected in their own buying policies. Frenzied markets in major cities indicate that buyers themselves are no less the victims of scare psychology than consumers.

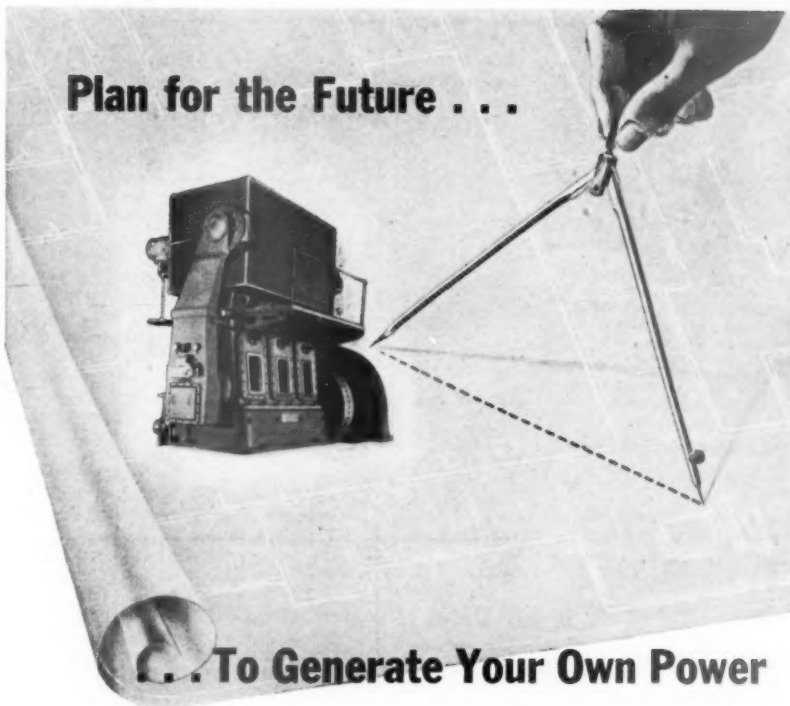
• **Buyers' Big Scramble**—In New York, where attendance in the busiest months of January and February is estimated at 66% more than normal, buyers stand in



According to Harold W. Volk, National Shoe Retailers Assn. head, the new shoe quota, just under the 3.7 average for the past five years, is O.K.

Business Week • February 13, 1943

Plan for the Future . . .



. . . To Generate Your Own Power

with SKINNER "Universal Unaflo"

Steam Engines

INDUSTRIAL America is already looking forward to the day when our gigantic wartime plants will be restored to a peacetime basis. When that day arrives, vital materials now required by our armed forces will again be available for the production of consumer goods. Healthy competition in business will be resumed, and the manufacturer whose production costs are lower will have a definite advantage.

Plan now for the future—plan to effect savings in your power costs. In the past, many efficient power users, in varied industries, have found that in no other department of their business could savings be effected equal to those made by generating power in their own plants with Skinner "Universal Unaflo" Steam Engines and utilizing exhaust steam for heating and processing purposes.

Even though our production facilities are today devoted entirely to the building of Skinner Unaflo Steam Engines for the Army and Navy, our research and engineering departments are available now to discuss your plans for the future.

"The Most Economical Steam Engine Built"

SKINNER ENGINE COMPANY FOUNDED IN 1868 ERIE, PA.



Put your imagination on overtime!

Ideas to speed production—to effect economies of time and effort—to save materials—these will make the American secret weapon that will win the war.

Put your imagination to work—for your own satisfaction, for job advancement, for increased production in the war effort. Stimulate your, and your employees', creative potentiality by reading this new book.



Just Out HOW TO "THINK UP"

All over the country factories have worked out employee suggestions systems because of our pressing need for increased production and the release of manpower. Some of the results of these suggestions systems are truly amazing.

Donald Nelson says, "Through suggestions systems this improved production art is being brought to the surface. The millions of little improvements that save an hour or a pound of brass make it devastating. In their aggregate these will amass our production victory."

In this book Alex Osborn tells how some of these ideas have been thought up and sketches a method for stimulating the thinking up of ideas. His booklet will spark the imagination of the individual, and prove a boon to the executive who is seeking to install or develop an employee suggestions system.

● It describes scores of valuable ideas that have come from factory workers and explains how they were thought up.

● It further outlines a method for anyone to follow in stimulating his ability to "think up."

● You will want to play the figure-of-speech game (see page 28) for the fun of it. It's a real imagination developer.

● You will want to try the once-a-week imagination exercise described on page 32.

● You will approve too the common-sense suggestions on pages 34 and 35.

John Collyer, President of B. F. Goodrich, says, "Nearly all of us have more imagination than we ever put to work. Too often we either do not try hard enough to think things up, or are too modest to hand in ideas which occur to us. For victory's sake, let us put our imaginations on overtime!"

Let this book help you. You will enjoy reading it—and every page of its sensible suggestions will guide you to personal profits. Send for a copy for 10 days' examination, subject to approval or return, today. Just mail this coupon.

FREE EXAMINATION COUPON

McGraw-Hill Book Co., 330 W. 42 St., N. Y. C.
Send me Osborn's How to "Think Up" for 10 days' examination on approval. In 10 days I will send 50 cents, plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

Name
Address
City and State
Position
Company BW-2-13-43

INFLATED INVENTORY DRAINS OFF RAPIDLY

A nation-wide survey of department store inventories today would probably show not much change in either direction from the over-all picture which existed a year ago. In the first half of 1942, the stores stocked up feverishly in the expectation of shortages in many lines aggravated by unusually heavy buying induced by war-inflated payrolls. By the end of July, their stock position had attained the unprecedented level of 67% above July, 1941.

Then the expected shortages began to develop and the expected buying rush began to get under way. Sales started booming, and replacement merchandise just wasn't available. By the end of November (latest figures currently available), inventories were only 9% higher than they were a year earlier. Incomplete statistics for December indicate a further decline.

As was to be expected, stores in war boom areas show the least favorable position. The eleventh and twelfth Federal Reserve districts—Dallas and San Francisco—where income payments are running at a higher level than in any other sections of the country (BW—Feb. 6'43, p71) show sizable declines in department store inventories during December:

Inventories compared with same date, 1941
Nov. 30, Dec. 31,
1942 1942

DALLAS		
Total Store	— 3%	— 7%
Woolen Dress Goods	+ 2	— 6
Linens & Towels	— 10	— 14
Blankets, etc.	— 2	— 9
Jewelry	— 15	— 27
Toilet Articles & Drugs	+ 6	— 10
Women's Apparel & Accessories	— 10	— 15
Women's & Children's Hosiery	— 24	— 17
Women's Underwear, etc.	— 24	— 42
Furs	— 15	— 18
Men's & Boys' Wear	+ 13	+ 10
Men's & Boys' Shoes	+ 30	+ 23
Housefurnishings	— 11	— 19
Refrigerators	— 86	— 88
Other Major Household Appliances	— 31	— 43
Radios	+ 42	— 1
Luggage	— 26	— 46
Basement Store	— 6	— 5

SAN FRANCISCO		
Total Main Store	+ 7%	0%
Piece Goods	+ 7	+ 2
Small Wares	+ 5	0
Ready-to-Wear Accessories	0	— 4
Women's & Children's Hosiery	— 4	+ 6
Women's Underwear, etc.	— 9	— 27
Women's & Children's Shoes	— 2	— 4
Women's & Misses' Ready-to-Wear	+ 5	— 6
Furs	— 23	— 32
Men's & Boys' Wear	+ 19	+ 19
Men's & Boys' Shoes	+ 5	— 2
Housefurnishings	+ 9	— 3
Major Household Appliances	— 38	— 59
Luggage	— 4	— 20
Basement Store	+ 28	+ 28

Income in the Chicago district has just about paralleled the rise in the country as a whole. And retail inventories in this area dropped only slightly during December:

	Nov. 30, 1942	Dec. 31, 1942
Main Store Total	+ 9.4%	+ 8.0%
Piece Goods	+ 16.8	+ 9.2
Small Wares	+ 11.8	+ 7.7

Nation-wide Inventories (compared with same date, 1941)

	July 31, 1942	Nov. 30, 1942
Grand Total — Entire Store	+67	+ 9
Main Store — Total	+66	+ 9
Women's Apparel & Accessories	+65	+ 3
Coats & Suits	+116	+31
Dresses	+ 9	+ 4
Infants' Wear	+78	+ 1
Women's Underwear, etc.	+89	— 6
Women's & Children's Hosiery	+173	—10
Women's & Children's Gloves	+41	+ 1
Women's & Children's Shoes	+33	+ 3
Furs	+ 3	— 8
Men's & Boys' Wear	+67	+17
Men's Clothing	+60	+30
Men's Furnishings, etc.	+76	+13
Men's & Boys' Shoes	+40	+ 3
Home Furnishings	+67	+12
Furniture	+56	+11
Rugs	+79	+29
Draperies, etc.	+55	+10
Major Household Appliances	+31	—36
Blankets, Linens, etc.	+70	+14
China & Glassware	+30	+ 9
Housewares	+90	+13
Piece Goods	+57	+13
Cotton Wash Goods	+44	+13
Small Wares	+63	+ 8
Notions	+71	+19
Toilet Articles & Drugs	+70	+11
Jewelry & Silverware	+59	+ 1
Basement Store	+77	+13

In the St. Louis area, the over-all inventory position actually improved slightly:

	Nov. 30, 1942	Dec. 31, 1942
Total Main Store	+ 7%	+ 9%
Piece Goods	+10	+20
Small Wares	+ 8	+ 7
Women's Apparel & Accessories	+ 3	+10
Women's Hosiery	— 5	+34
Children's Hosiery	+ 2	+18
Women's Underwear, etc.	—15	—21
Women's Shoes	+12	+14
Children's Shoes	+ 9	+ 6
Furs	+15	+ 8
Men's & Boys' Wear	+15	+14
Men's Shoes	+ 6	+ 4
Housefurnishings	+12	+18
Refrigerators	—77	—85
Other Major Household Appliances	—31	—36
Luggage	—15	—22
Basement Store	+ 6	+13

In all districts, stocks declined sharply in certain departments—notably refrigerators and other major household appliances, luggage, and women's underwear. And it is in these departments particularly that the nation's department stores are fearful of being left with completely bare shelves by summer.



The Salesmanager Faces the Minus Quota
—this book defines the problems which arise when a salesmanager must instruct his men to refuse orders. Shows how many salesmanagers have set new goals for their organizations, and how they have used advertising in their war-time job of helpful service.



The Advertising Manager on Industrial - Information - Please—

The advertising managers who are doing the best job in wartime are the ones who recognized that advertising could supply vital information to the expanded production lines of industry. In developing such advertising they have contributed new methods that will continue to affect advertising long after the war is over.

This book, offered in the coupon below, shows typical campaigns, tells how they were developed, and results secured.



Case Studies of Complete Campaigns—
Each month, McGraw-Hill issues a thorough Case Study of some campaign in which an advertiser has made constructive use of advertising to help war production, or prepare for reconstruction.

Three such studies are now available: (1) Air Reduction Sales Corporation (2) L. H. Gilmer Company (3) Plymouth Cordage Company.~

These are *complete* campaign studies, showing all types of media and copy, educational and merchandising material. Sent on request ...Just check and sign the coupon.

★ ★ ★

This advertisement, and the material offered below, are contributions of The McGraw-Hill Network of Industrial Communication—toward a better understanding of the power of advertising to explain a machine, a product, a business, or an economic system.

The McGRAW-HILL

NETWORK OF INDUSTRIAL COMMUNICATION

Research Dept., McGRAW-HILL Publishing Company, Inc., 330 West 42 St., New York, N. Y.

Please send the books checked:

☐ **"TOP-EXECUTIVE GOES TO WAR"**
Shows how to analyze advertising policy in war. Based on Alcoa and other famous war campaigns.

☐ **"SALESMANAGER FACES MINUS QUOTA"** Tells how industrialists are keeping objectives before sales forces with "nothing to sell".

☐ **"ADVERTISING MANAGER ON INDUSTRIAL - INFORMATION - PLEASE"** Reports on campaigns that have been revised to meet the challenge of war production.

☐ **AIR REDUCTION CASE STUDY**

☐ **GILMER BELTING CASE STUDY**

☐ **PLYMOUTH CORDAGE CASE STUDY**

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____



For the tough small jobs

FOR war work where there is much heavy duty lifting of loads weighing up to 500 and 1000 lbs., here is a hoist that enjoys the hard going.

The Load Lifter Jr. is designed with simple but completely effective construction. Therefore, there is nothing to cause trouble or interfere with its all-out, day-and-night performance. Where there is little headroom and a great deal of important lifting to be done, the Load Lifter Jr. is a workman's joy and a production executive's delight.

If your maximum loads are 500 or 1000 pounds then the Load Lifter Jr. is the hoist you should have. (For larger capacities, there is the Load Lifter—a big brother of the one pictured above.)

Load Lifter Jr. Hoists are available in capacities of 500 and 1000 lbs. For complete information write for catalog 347-B.



'LOAD LIFTER JR.' Hoists

MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN

Builders of 'Shaw-Box' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' Industrial Instruments.

YOUR PACIFIC COAST OFFICE?

Here's an established, centrally-located small business unit—complete with experienced well-qualified personnel—ready to represent you on the Coast.

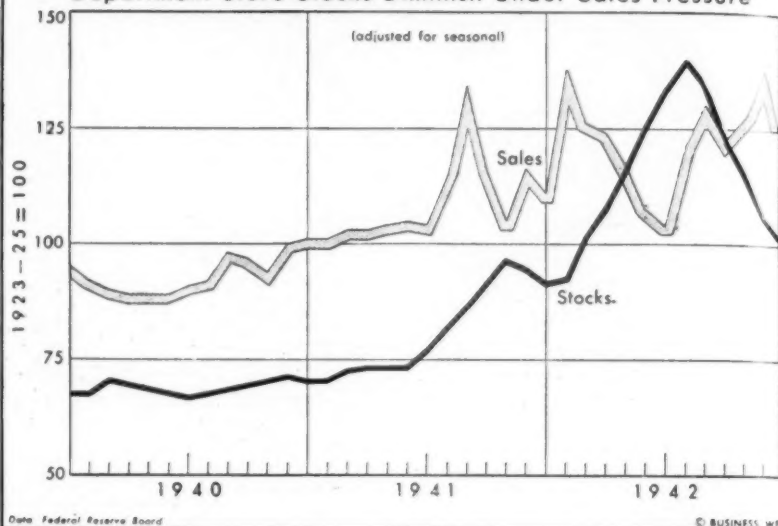
Ideal opportunity for manufacturer, distributor, advertising agency, or other commercial activity.

This office successfully handled over \$10,000,000 in sales during past 4 years. Highest references. Moderate cost. For further details, write:

**SUITE 210 • 425 MARKET STREET
SAN FRANCISCO, CAL.**

THE GOODS PINCH ARRIVES

Department Store Stocks Diminish Under Sales Pressure



line to get into show rooms, fill mid-town hotels, and pay the entertainment bill. Middle and Far Western markets report similar activity, with registrations in Chicago running more than 15% ahead of 1942.

But anxious buyers are not beginning to get enough merchandise to fill store shelves in 1943. They know that although total inventories are still higher than last year, the margin of improvement has been steadily reduced. In July stocks were up 67% over last year; in November, only 9%; and minus signs are expected before long if the nation's buying spree continues. Last year's sales of \$56,000,000,000 were the largest in history (BW-Jan. 23 '43, p43).

• **This Year's Trend**—Total stocks probably will not fall so low in the first half of the year that retailing will have to swing far out of its orderly path, but already certain lines are at bottom levels. Electric appliances and other hard goods already are virtually discontinued lines, and all jewelry lines are low. On the West Coast there is an element of adventure in the hardware picture as belated shipments of hard-to-get items arrive. But this is only a temporary help.

Bed linens, shirts, men's underwear, and other merchandise using long staple cotton are extremely short since about 8,500,000,000 yards have gone to war. Hosiery of all kinds is short, likewise lingerie. Other extremely short lines are furs, rugs, draperies, woolen blankets, and down or wool-filled comforters (BW-Feb. 6 '43, p67).

• **Clothing on Top**—No line will be available to stores in 1943 in quantities as large as last year, but apparel inventories probably are in the best shape. Even in Detroit, where buying power has been increased by the influx of 340,000 persons in the past 18 months,

both men's and women's ready-to-wear is relatively plentiful. Basement stocks have held up better than high-priced goods, probably because a high percentage of basement customers have acquired high wages in war industry, hence taken to the carpeted salons.

One bright spot in the supply picture is wool, and it, of course, is not in plentiful supply. As a matter of fact, the wool picture is bright only by contrast with the gloomy outlook. Textile buyers for the department stores are relieved about woolens, but they face diminishing cotton and rayon yardage. Regardless of the jockeying of textile supplies, the consumer can be sure of an increasing number of blends, mostly woolen, on the market.

• **Preference to Big Stores**—Types of goods are far from the only variable in the present inventory situation. Considerable dislocation will result from transportation difficulties, fuel shortages, etc. More than that, greater resources of big stores will always get them preferential treatment. Furthermore, their buyers are in the market every day in the year and can take advantage of spotty supplies when they appear.

Cheap stores, like small stores, feel the pinch more because low-end goods are harder to obtain than high-priced goods, since manufacturers are utilizing materials for better goods to make the most profit.

• **Little Man's Pinch**—Inventory control (BW-Nov. 7 '42, p48) will make it harder on small stores, too, since they may have overbought in greater proportion than big stores, therefore will have more trouble getting down to inventory control levels. Then their troubles will be compounded, for once they have gone through inventories they will have even more trouble than big stores replenishing.

FINANCE

Net Results

Income reports for 1942 show the effects of a deeper tax bite, but there are several surprise gains.

As corporation income statements for 1942 begin to appear, investors are waiting anxiously to see how their companies made out in the first year of our participation in the war. It has been obvious for months that total corporate earnings were not increasing fast enough to offset the spectacular rise in taxes (BW—Nov. 14 '42, p102). Big question now is how much net income dropped under 1941, and how particular companies fared in comparison with industry as a whole.

• **The Picture Brightened**—Tabulation of early earnings reports shows mixed results, but for most manufacturing and distributing corporations the picture is a good deal brighter now than at the half-year mark (BW—Aug. 1 '42, p60). Although the final version of the 1942 revenue act comes down hard on corporate incomes, it is milder than any of the early proposals.

Many companies which had prepared for the worst in taxation have readjusted net income estimates on the upside. Moreover, gross earnings in the third and fourth quarter shot up rapidly as plants finished conversion and got into full production.

• **Net Decline: 6%**—Rough estimates by the Dept. of Commerce put total corporate income before taxes at \$18,800,000,000 for 1942, which compares with \$13,800,000,000 in 1941. Federal income and excess profits taxes came to \$12,000,000,000 last year. In 1941 they were \$6,600,000,000. This leaves net corporate income of \$6,800,000,000 in 1942 and \$7,200,000,000 in 1941, a decline of about 6%.

These figures apply to all corporations, however. For manufacturing companies, the percentage drop will be much larger. Comparable estimates, based on third quarter statements, showed a decline of 15% in net earnings of manufacturing companies, and even this looks like an understatement in comparison with the National City Bank's study which showed a drop of 32% (BW—Dec. 5 '42, p91).

• **Heavies Hit Hardest**—As the accompanying table shows, by no means all corporations followed the pattern laid out by the totals. Some manufacturers increased production enough to offset new taxes. A few even came out with a rise in net income. Squeezed by ma-



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Excerpt from New York Herald Tribune, January 11, 1943

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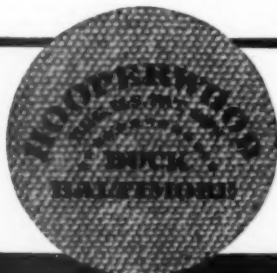
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terial shortages and rising expenses or partly closed down for conversion, others registered a drop in income before taxes.

In general, heavy industries such as steel show the biggest declines in net income. They have been going full blast since the original defense program got under way, and so there isn't as much opportunity for them to expand earnings. Moreover, with most of their business coming from the government, they are working on slimmer margins than they did in civilian production. Tax boosts hit them hard because they already are deep in the excess profits tax bracket.

● **How Steels Fared**—Bethlehem Steel, for example, charged \$151,500,000 to taxes in 1942, which compares with \$85,300,000 in 1941. Net income was only \$23,388,000 last year, 32% below the \$34,458,000 recorded in 1941. U. S. Steel's report presents much the same picture. Federal taxes last year jumped from \$118,700,000 to \$155,400,000. Net income dropped from \$116,020,000 to \$72,142,000.

Incidentally, Big Steel's report gives

a good illustration of how the 1942 tax bill compares with what business had feared. In the fourth quarter, the company charged nothing to taxes. Instead, it gave itself a \$6,200,000 credit to offset over-accrual in preceding months. Part of the credit resulted from a \$16,500,000 contribution to the company pension fund, and some of it came from the tax credit allowed for retirement of \$41,400,000 in long-term debt.

● **Food Incomes Increased**—Reports of the consumer goods industries were more varied, but most of them showed the same trend. Many food lines, however, rang up a comfortable increase in net despite rising tax bills. Continental Baking came out with \$3,555,000 net last year, while in 1941, it made only \$2,862,000. Taxes almost doubled, rising from \$1,251,000 to \$2,296,000, but the jump in income before taxes was big enough to absorb them.

● **Some Nets Deceiving**—Many companies, particularly the larger ones, have been setting aside heavy reserves for postwar contingencies and conversion. Where they charge these to current in-

Reversal of a Trend

Corporation income statements for 1942 confirm that during the year the trend in net earnings turned downward. Income before taxes continued to mount rapidly, but federal income and excess profits taxes more than offset the gain. At that, final

results for the year are better than interim reports led investors to expect. The following table shows how taxes and net income compare for a cross section of manufacturing and distributing companies which have made early reports (000 omitted):

Company	Net Profits After Taxes		Taxes	
	1942	1941	1942	1941
Arlington Mills*	\$ 920	\$ 1,370	\$ 4,392	\$ 1,526
Atlas Powder	1,856	1,905	4,440	4,621
Bethlehem Steel	25,388	34,458	151,500	85,300
Bigelow-Sanford Carpet	1,254	2,044	2,040	3,080
Bristol-Myers	2,464	2,378	4,693	2,538
A. M. Byers	1,257	1,447	2,973	744
Caterpillar Tractor	7,009	7,784	15,312	8,467
Consolidated Paper	1,064	1,449	1,215	1,456
Continental Baking	3,555	2,862	2,296	1,251
Devco & Reynolds*	909	1,178	370	337
Dresser Mfg.	1,729	1,011	2,952	1,083
Ely & Walker Dry Goods*	1,029	1,005	5,065	1,201
Hercules Powder	5,547	6,099	20,513	14,163
Hooker Electrochemical*	1,442	1,183	4,191	890
Howe Sound	1,747	1,808	1,455	1,590
Industrial Rayon	2,006	2,312	4,608	3,395
Inland Steel	10,721	14,824	23,866	23,255
Interlake Iron	1,242	2,406	2,048	1,638
Johns-Manville	5,570	5,967	15,932	10,385
Jones & Laughlin	10,020	16,275	24,000	14,343
G. R. Kinney	532	533	1,170	409
Liggett & Myers	15,755	17,850	16,576	12,073
Loews, Inc.	12,133	11,135	6,933	3,747
P. Lorillard	3,915	3,383	3,623	1,771
Mathieson Alkali	1,206	1,744	1,450	1,150
G. C. Murphy	2,925	3,661	6,457	4,038
National Steel	11,930	17,102	30,300	19,825
North American Aviation	10,435	6,076	32,743	9,933
Purity Bakeries	1,715	1,429	2,124	739
R. J. Reynolds	19,860	23,239	23,884	18,492
Sutherland Paper	738	818	1,410	756
Sylvania Industries	998	1,151	1,279	1,075
U. S. Pipe & Foundry	1,656	2,615	4,907	2,795
U. S. Steel	72,142	116,020	155,400	118,700
Universal Pictures	2,968	2,673	4,325	1,766
Wayne Pump*	817	1,002	435	324
Youngstown Sheet & Tube	10,306	16,124	24,700	21,500

* Fiscal year ended Nov. 30.

ome, they reduce the net available for dividends even though the money remains in their treasuries. To some extent, therefore, reported earnings this year are larger than they look. Big Steel, for instance, put \$25,000,000, an amount equal to one-third of its net, into a special account earmarked for postwar contingencies. If this had gone into net, income after taxes would have totaled \$97,000,000.

If these reserves have to be used later, they represent valid charges against income (although Washington does not recognize them as deductions from current taxable income). But where the company has stayed on the safe side by piling away a bigger reserve than it needs, reported income will show up smaller than it actually is.

Rumpus in Erie

Robert R. Young renews old battle with Wall Streeters over road's bonds—and raps at a new ally in doing so.

Robert R. Young, heir to what's left of the Van Sweringen railroad empire, specializes in kicking over apple carts, and the favorite objects of his boisterous attention are negotiations for sale of new rail securities. Hence, when Wall Street heard that the Erie had got into a fight over a \$14,000,000 bond issue, it knew the rest of the story without being told. The scrappy boss of Alleghany Corp. was throwing his weight around again.

Precedents Aplenty—Except that the names and figures are different, there's nothing to distinguish this particular fight from half a dozen others that Young has started in his long career as Wall Street's enfant terrible. All of them are episodes in the ancient feud between Young and the group of New York bankers, headed by Morgan Stanley & Co., which traditionally handles rail financing.

Big issue is whether roads and terminal companies should sell their securities by competitive bidding or work out private arrangements with their bankers for underwriting and distribution. Since the time of the first J. P. Morgan, it has been the custom for railroads to take their financing problems to Morgan. Private negotiation was rarely challenged until 1938 when Young began demanding competitive bids on the issues in which his Alleghany Corp. had a stake.

Erie Went to Morgan—In the present case, the Erie wanted to sell \$14,000,000 in 3½% bonds to replace notes sold by the Reconstruction Finance Corp. It followed the well beaten trail Morgan Stanley's door and arranged



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Dividend on Common Stock

NOTICE IS HEREBY GIVEN that a dividend of 25¢ per share has been declared on the Common Stock of Atlas Corporation, payable March 12, 1943, to holders of such stock of record at the close of business February 15, 1943.

Dividend No. 26 on 6% Preferred Stock

NOTICE IS HEREBY GIVEN that a dividend of 75¢ per share for the quarter ending February 28, 1943, has been declared on the 6% Preferred Stock of Atlas Corporation, payable March 1, 1943, to holders of such stock of record at the close of business February 15, 1943.

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As soon as the news came out, Young passed the ball to Carl E. Newton, president of Alleghany-controlled Chesapeake & Ohio. Newton promptly filed a bitter protest with the Erie management, threatened legal action against directors if the deal went through. Simultaneously, the Interstate Commerce Commission heard from Cyrus S. Eaton of Otis & Co., Cleveland investment bankers and pals of Young.

• **ICC to Hold Hearings**—Morgan went ahead with the sale in spite of Young's howls. The ICC, however, will hold public hearings on the deal if C. & O. wants them.

Young's attack via the C. & O. did nothing to endear him to the Erie management. C. & O. lost control of the Erie in reorganization when its stock holdings shrank to about 14%. Relations have been somewhat strained since then, particularly within the last year or so when the Erie has been feeling the competition of the Nickel Plate, a C. & O. subsidiary.

The squabble was also a disappointment to bankers who hoped that Young and the Morgan group had patched up their differences. It's not that Wall Street objects to a good fight, but investment bankers are jittery for fear the

Securities and Exchange Commission will step in and make competitive bidding the rule in industrial as well as public utility issues.

• **How It All Started**—The feud between Young and Morgan is too old to remember in discreet silence. It all began in 1919 when Young and his partner, Allan Kirby, bought up Alleghany Corp., a holding company in the Van's elaborate pyramid of railroads (BW—Dec. 3, 1935). Immediately, they got into trouble with Guaranty Trust and Morgan, formerly bankers for the Van Sweringen

Alleghany then owned 71% of the stock in Chesapeake Corp., thus controlling Chesapeake & Ohio, Erie, Nickel Plate, Pere Marquette, Chicago & Eastern Illinois, and Missouri Pacific. But Alleghany's assets were pledged as collateral against its bond issues, and with the market close to the bottom the bonds were under water—that is the value of the collateral was less than that guaranteed by the indentures.

• **Who Owns What?**—Guaranty impounded the collateral, which made Alleghany a holding company without anything to hold, gave Guaranty voting control of C. & O. That touched off the fight that seesawed back and forth until last year. It finally ended in compromise recapitalization that left Young in control of everything not washed out by bankruptcy proceedings against various subsidiary roads.

The row over competitive bidding grew up as part of that feud. In 1935 Young awarded \$30,000,000 worth of Chesapeake & Ohio bonds to Halsey Stuart & Co. of Chicago and Otis & Co., instead of to Morgan (BW—Jan. 15, 1939, p. 20). Following this there was scrap over \$12,000,000 Cincinnati Union Terminal refunding bonds, and another over St. Louis Terminal obligations. In 1941, the Erie was the battleground when Young forced competitive bidding on \$18,000,000 bond issue (BW—Sept. 20, 1941, p. 67). In most respects that fight was identical with the present one.

• **Stedman's Position**—There is one new angle to this case, however, and that also ties in with another of Young's many fights. Among the Erie's directors is insurance man John Stedman whose committee drew up reorganization plans for the Missouri Pacific. Young has battled tooth and nail in an attempt to get a bigger settlement for the Mopac's junior issues held by Alleghany.

Just a week ago, he and the Stedman group announced an amiable compromise that would straighten out MOPAC difficulties (BW—Feb. 6, 1943, p. 93). But in his letter to Newton of the C. & O. Young went out of his way to take a swipe at Stedman as an Erie director. This strikes bankers as a peculiar way to wave the olive branch.

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COMMODITIES

Problem in Cotton

WPB wants production of cotton goods, Department of Agriculture spurs farmers, but mills face labor pinch.

Ability of the United States to consume cotton this year (lend-lease and aid to peoples freed from the Nazis considered) will be limited only by the capacity of our looms to produce and our mills to procure labor. Moreover, the seed ginned from the 1943 cotton crop will be third largest of the six major sources of fats and oils (butter, lard, cottonseed, linseed, soybeans, and peanuts) so much needed for food and industry (page 28).

More Output Asked—Under the circumstances, it's small wonder that the Department of Agriculture is urging full planting of acreages allotted individual farmers under the Agricultural Adjustment Agency's 1943 quotas. Yet this is a decided backflip in broad policy.

The "ever-normal warehouse" has been bulging with surplus cotton for so many years that the D. of A. usually has offered inducements to growers who would plant less than their allotments. In fact, they were paid last year for any cotton acreage they would divert to planting of peanuts providing such growers were pressed for oil.

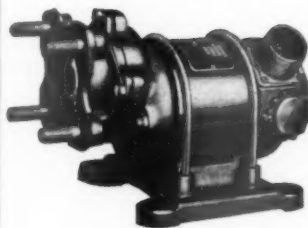
Higher Goal Likely—Actual cotton plantings in 1942 covered 23,310,000 acres and the yield—due to generally much better than average weather—was just under 13,000,000 bales. Ten weeks ago, the 1943 goal was set at 22,500,000 acres, calculated to produce about 11,000,000 bales with normal weather. Now it looks like farmers will be encouraged to top these figures by a substantial amount.

Biggest need is for long-staple cotton—that which scales $1\frac{1}{2}$ in. and up in length. (When cotton, such as the Sea Island variety, measures $1\frac{1}{8}$ to 2 in. long it may be used even as a replacement for silk in balloon fabric.) The country has on hand a two-year supply of cotton 1 in. or under, so there obviously is no crying need for short-staple.

Seed and Linters—However, all varieties yield seed to be pressed for oil. Moreover, there is a decided dearth of linters (the fuzz remaining on the seed after ginning has removed the staple), which are vital in making cellulose for explosives.

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THE MARKETS

Wall Street has had a lot of experience with the trial balloons that ascend from headquarters of the Securities and Exchange Commission, but it can't remember anything like the current talk about plans to control a future stock market boom. From a volume standpoint, last year was the dullist since 1914. In April, prices hit the lowest point since the bottom of the depression, and after ten months of painful recovery, they still haven't approached pre-war levels. Under the circumstances, traders and brokers don't know whether SEC's musings should make them laugh or froth at the mouth.

● **What Is a Boom?**—Until last week end, Wall Street hadn't bothered much about the prospects of an inflationary boom. After more than two years of steady liquidation, it was glad to settle for the faltering recovery that began in May. Even optimists didn't look for another big bull market like the 1929 spree.

But on Sunday word leaked out of Philadelphia that the commission's staff was studying plans for heading off a dangerous boom in the securities markets. According to reports, staff members had put together a comprehensive memorandum predicting an inflationary explosion in stock prices. Suggestions for controlling it ranged from prohibiting margin trading to closing down organized exchanges entirely.

● **Soft Words Didn't Help**—Although the SEC did not publish the memorandum formally, traders are familiar with leaks of this sort. Usually they occur when it would be convenient for the commission to get public reaction to an idea without going on record as approving it. No one was surprised, therefore, when Chairman Ganson Purcell followed up the leak with a reassuring statement

which said that the commission had not approved the memorandum and had no intention of closing the exchanges. Yet no one was reassured.

As a matter of fact, most traders don't want an inflationary boom any more than SEC does, but they think there's no point in talking about it at this stage of the game. At its present levels, the stock market is only 40% above the April low, and barely 20% above the bottom it scraped when France fell late in the spring of 1940. Trading has been so light that a 1,000,000-share day is something to celebrate. In Wall Street's opinion, you can't have a boom on volume like that any more than you can get drunk on ginger ale.

● **Prices Don't Look High**—Comparison with the long-term picture makes the present market look even lower. The 90-stock average is now only 25% above the 1938 low, and it would need a 75% rise to get back to the 1937 peak.

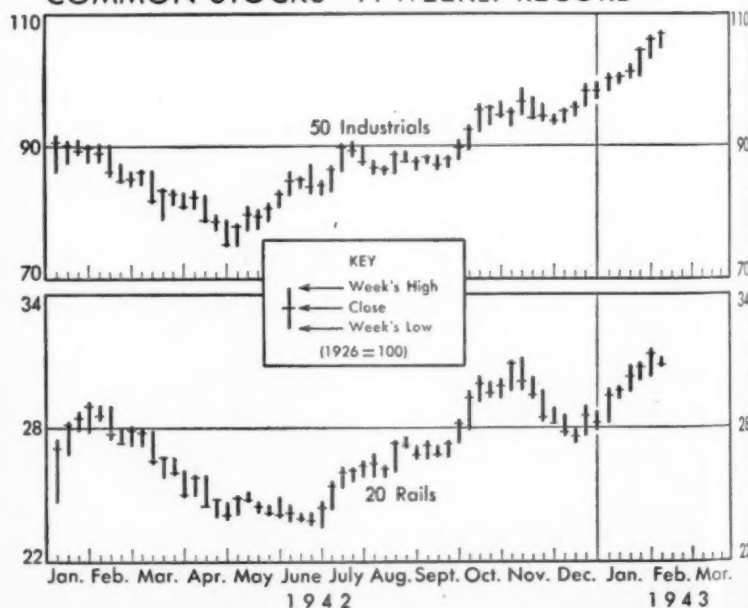
Even if an inflationary rise did get under way, clamping a lid on stock prices wouldn't touch excess buying power, the real source of inflation.

Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial ...	106.8	105.9	100.2	86.1
Railroad	30.8	31.3	29.7	27.1
Utility	40.4	40.4	37.6	34.1
Bonds				
Industrial ...	115.6	115.7	115.5	107.4
Railroad	91.1	91.8	89.5	86.7
Utility	110.1	111.0	110.4	104.7
U. S. Govt. ...	109.7	109.6	109.6	109.3

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS—A WEEKLY RECORD



Data: Standard & Poor's Corp.

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...ing 8,052,238 bales in 1940, 10,586,281 in 1941, and 11,439,198 in 1942. Serious doubt exists, however, if the industry can duplicate the 1942 figure this year.

Low for 15 Months—The mills' biggest handicap now is labor. Current estimates are that January (1943) consumption was 880,000 bales, 55,000 below December, the lowest in 15 months, and the first occasion since the middle of 1940 when use did not exceed the corresponding month of the preceding year.

Whether there is any possibility of relief from manpower stringency in the textile industry is problematical. The mills have high turnover due to the fact that they're in a low wage industry that can't compete against defense plant wages. They are anchored by a 40-hour week and price ceilings that undoubtedly would blight profits if an overtime agreement could be secured for a six-day work week instead of five (unless OPA simultaneously should kick the ceilings up a bit). And the mills necessarily draw upon an inferior labor reserve for their replacements.

Don't Forget the Waacs—Yet the industry has, within the last few days, been exhorted telegraphically by WPB to produce to the limit of capacity to meet "military and essential civilian needs." Let the mills forget, the Office of War Information points out that, on top of all the other cotton goods needs, "the Waacs have ordered more than 300,000 pairs of flannelette pajamas."

Seed Corn Boom

Feb. 1 checkup reveals virtually all white hybrid stock sold, although growers stored 60% more than a year ago.

Seed corn growers last week were checking their Feb. 1 stocks of hybrid white varieties, and corn millers were looking over their shoulders to see the figures. Growers found practically no unsold stock on hand, as compared with almost 50% unsold a year ago. This figure is all the more significant because they warehoused 60% more white hybrid last fall than a year earlier. It adds up to something like a boom in hybrid white corn—but a modest boom, at best.

Perennial Shortage—Reason for the processors' avid interest is that, year after year, they are unable to obtain sufficient white corn to meet their milling requirements. Nobody has any accurate statistics on white corn production or use, because U. S. government figures do not segregate white from the 3,000,000,000-bu. corn crop. Best guesses of the industry are that total white corn crop in 1942 was 200,000,-



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It's a notable fact that precision starts with the heat-treatment of the metal, rather than merely with its machining. Some metal parts of most weapons of war must work at extreme temperatures and under all kinds of adverse conditions. This calls for precise heat-treating—and explains the vital role of

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000 bu. and that around 75% or 80% of corn milled for human food is white corn.

There is never quite enough white corn to go around. The situation has been particularly tight in the war years because Eastern Canadian mills, which formerly drew ship cargoes of white corn from South Africa under British Empire preference agreements, are now competing for their needs in U. S. markets.

• **Equal Yield**—It is farm lore that on thin, poor soil, white corn outyields yellow. This tradition grew up in the years of open-pollinated seed corn. Nowadays, the very best hybrid white varieties yield bushel for bushel with the better hybrid yellows.

In the South, probably 50% of all corn grown is white. In Nebraska, where white corn has a strong foothold in the lower tier of counties, white runs 13%, or 26,000,000 bu. In Illinois the figure is around 71%, mostly in the south central counties. About 34% of Iowa's total output is white; oddly a strong hold of white corn is the rich northwest corner of the state.

• **More and Purer**—The American Corn Millers Federation is conducting a Corn Belt campaign to convert farmers to planting more of the white varieties, while Quaker Oats Co., biggest U. S. corn miller, is plugging for more and purer white corn for several counties around its mill at Sherman, Tex.

Because white can be successfully grown only if kept 500 ft. to 800 ft. away from yellow, the federation's promotion is confined to those areas already strong in white corn. Posters and pamphlets are used, but the pillars of the program are newspaper advertising in the county weeklies and a one-minute spot daily on radio stations.

• **Premium Price**—The ceiling price of white corn is 15¢ above yellow, and this is just about the difference in market quotations, but last fall white was bringing a premium of 30¢.

In some of its major food uses, white corn has a preferred status over yellow. Corn flakes are rolled from white corn grits; if yellow were used, the corn flakes would be almost black. Brewers' grits require white corn, since yellow grits are claimed to make the beer bitter and cloudy.

• **Five Leaders**—Five seed-corn companies put out an estimated 90% of the white hybrids. For the past five years General Foods, No. 2 among U. S. corn processors, has supported at the University of Illinois a fellowship devoted to developing better white hybrid corn and Quaker Oats has been at it for four years at the University of Missouri. Other major millers of corn are Kellogg Co. (Battle Creek), Krause Milling Co. (Milwaukee), Evans Milling Co. (Indianapolis), and Miller Cereal Co. (Omaha).

THE TRADING POST

Small Business and Renegotiation

The following letter was written by Mr. T. Hedlund, president of Elastic Nut Corp. of Union, N. J., to the members of the House Ways and Means Committee. Because it sets forth a situation that prevails in other small manufacturing plants, I am reproducing it in somewhat condensed in the interest of conserving space:

This company sells a small item of general use to thousands of customers. We are concerned with a relatively small invested capital, which, before 1939, was only a small shop selling its own product on individual orders to the general public. Our product, a self-locking nut, is a mechanical fastening device, suitable for use wherever fastening exists. It has thousands of applications, actual and potential, ranging from farm machinery to airplanes, like other kinds of general application, such as pins, hairpins or soap.

Because the machines manufactured by our customers are, temporarily, military equipment, the War Department claims that an order for, say, ten nuts priced at 9¢ a contract to be renegotiated under the statute. The company has thousands of such orders, some large and some small.

Although most of our production is now used ultimately to fasten war goods, that is not because the device is a war product, but because the demands of customers with high priorities long ago eliminated the normal mercantile market. Nevertheless, except for a few government purchases, our self-locking nuts are still sold as they always were—on straight purchase orders to private concerns.

This company is in effect a hardware dealer, manufacturing its own product. It probably receives 50,000 separate orders in a year. It is quite true that the enormous demands for all mechanical devices and materials has swelled the volume of our business just as it has increased the demands for nails, cloth and paint. However, it does not follow that we, and similar companies, gain excessive war profits. We were incorporated in 1934 with a capital of \$9,000. Consequently, we have a low tax credit and high excess profits tax.

From 1934 to 1939 our growth was normal and our capital was increased to \$509,000, but we were still a small concern, unable in 1939 to obtain sufficient new financing through loans or additional capital, to expand our plant enough to meet the sudden large demand for our product due to defense and, later, to war construction. In that respect this company differs substantially from large concerns which in 1939 had sufficient plant, capital and peace-time earnings to finance expansion.

Nevertheless, we had to expand, immediately, in 1939. Otherwise our small business might have been lost to the then existing big companies which could and undoubtedly would have filled the demand for self-locking nuts.

Being too weak in 1939 to obtain sufficient

money from outside sources, we put our own profits into new plant, accepting, at the same time, government financing, as, with our growth, it became available to us. We have invested over \$2,000,000 of our own money.

Had we hesitated to adopt this policy in 1939, we believe that two results would have followed: we would have lost our business to larger companies and the government would have lost the benefit of our skill and experience.

Our decision in respect to the investment of our own funds in plant had to be made promptly in 1939 and adhered to in the succeeding years, but the renegotiation law was not enacted until April 28, 1942, and its retroactive effect extends back to the formative years of this and similar companies.

Our production is competitive and our prices were determined partly by competition. Our increased business was not based upon government contracts. It was still a business based upon thousands of separate orders from private concerns, and we had to determine our prices in relation to costs, competition and other commercial factors. Competition and risk were factors which not only led us to make our prices; they have also led us to reduce our prices from time to time so as to preserve our competitive situation for the future.

Having over 50,000 orders, large and small, to analyze for the renegotiators under the present law, we must make about 500,000 calculations and have had to establish a special department of accountants, lawyers, and clerks for this purpose. We do not believe that Congress intended the renegotiation law to apply to concerns selling articles of general use, without contracts, on an open market to private consumers, regardless of the ultimate use of such article. We do believe that renegotiation is not required to prevent companies like this, operating in the highest excess profits tax bracket, from deriving excessive profits from the war. We do not believe that Congress intended to penalize small companies which, wisely and patriotically, turned their own earnings back into added plant facilities as soon as the probable war demand for their products became evident.

To reach into the fixed assets of a company which has put allegedly renegotiable profits into its plant and to extract them in a lump sum would hamper its productivity during the war and imperil its chances of postwar survival.

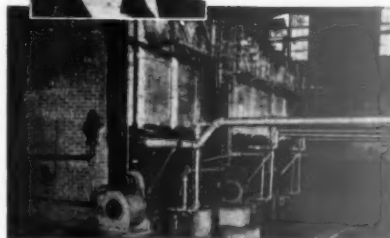
Mr. Hedlund suggests that if the renegotiation statutes are not repealed they should be amended to exempt contracts or orders for certain articles of general use, to exclude payments on orders placed before April 28, 1942, and to provide also that a company which has invested its own profits in expanded war plant should be permitted to repay "excessive profits" so invested over a period of five years, or if the war should end sooner, retain the balance as a cushion to cover reconversion cost. W.C.

IRON FIREMAN

Cuts Steam Costs 32% at Pacolet Mills



Marshall C. Stone, vice president and general manager, Pacolet Manufacturing Co., New Holland, Ga.



Iron Fireman Stokers in the boiler room at Pacolet Mills. Coal is carried to boiler through the overhead tubes.

Fuel Cost Savings \$14,784 a Year

THE Pacolet Manufacturing Company has cut steam costs 32% by the installation of Iron Fireman pneumatic spreader stokers. This reduction amounts to fuel savings of \$14,784 a year, according to Marshall C. Stone, vice president and general manager, who adds: "The investment will be self-liquidating in a very short time."

The Pacolet job is in many ways a remarkable example of modernization. There are three B & W Vertical Baffled boilers rated at 266 H.P. at 145 pounds pressure. The boilers are now operating at 77.5% efficiency with a processing load. Two of these boilers operate at 110% of rating with a processing load in summer, and in winter with a heating load in addition to the processing load they operate at 165% of their rated capacities.

The showing made by Pacolet is an indication of what your plant may be able to achieve. Give Iron Fireman an opportunity to show what can be done for you. Iron Fireman Manufacturing Co., Cleveland, Ohio; Portland, Oregon; and Toronto, Canada. Write or wire 3285 W. 106th St., Cleveland, O.



IRON FIREMAN

Automatic Coal Stokers

THE TREND

HOW BIG AN ARMY?

The nation today is being wrung over the problem how large an armed force we should attempt to raise. Examination of that problem lays bare the fundamental nature and workings of the war effort.

Unfortunately, the question cannot be reduced to simple, static terms: How many men do we need? How many can we support? Within limits, what we must we can; and equally, what we can we must. Precisely what is vital are the limits. The problem is to maximize our effort for the war we face.

And, a maximum effort for a war thousands of miles from home will be different than for one to repel an invader; different for a war to be won in 1944 than for one which can be won only in 1946; different for a war without allies than for one alongside allies.

• **For, at the outset,** we must recognize that our basic resources are limited. More, we must recognize that our economy, and so our effort, is in constant flux.

Inevitably, a war effort requires a diversion of resources from civilians. And inevitably that sets in motion economic degeneration which sooner or later comes home to roost in the war effort itself. In a war of indefinite duration, our civilian autos, for instance, would wear out. Either auto output would be resumed or many arms workers wouldn't get to their jobs.

Either way the war effort would suffer. This implacable war trend is immeasurably accentuated the more we divert. When we cut down on food, reserves of health are consumed—faster than are stocks of autos.

Of course, as the degeneration worsens, the impact on the immediate war effort can be cushioned partially by further diversion from civilians. But there is a bottom to the civilian well—complete collapse.

• **Now, the basic resource** for war is manpower. Experts figure that the limit of our manpower mobilization for end-of-1943 is 62,500,000 persons; that an increase in war industry and agricultural requirements to 27,500,000 and in those for the armed forces to 11,000,000 would necessitate a reduction in other nonagricultural employment from 26,500,000 workers in Dec., 1942, to perhaps 23,000,000 by the end of 1943.

Can we bear that? The answer depends on what we judge to be the minimum to forestall civilian collapse at the end of this year—and also, on what we conceive to be the irreducible minimum for later dates at which we figure still to be fighting, by which time degeneration will have accumulated.

Entering into the problem now is the fact that we must fight far overseas, alongside allies. That, and U-boat successes, make shipping a bottleneck in our effective effort. And so the additional question arises of how to budget our shipping resources for maximum effectiveness.

The answer depends in part upon technical judgment,

in part upon high policy. How can we hit the Axis hardest—by transporting only munitions to distant lend-lease lands whose troops are waiting, or by sending American soldiers as well as supplies to nearer fronts?

But what are the strategic advantages of the alternatives? Will one soldier in the field in North Africa be more or less effective than one soldier in the field in Russia? And, by "effective" do we mean in winning the war alone, or, in some special sense, in winning the peace, too? Even the answers to these questions, involving so many complexities, will change with the war.

• **Against this broader background,** we can begin to approach the initial problem. Whatever the justice of claims of lack of intelligence on one side or the other, implicitly, at least, the disagreements are based upon different viewings of the war we face. Opposition to the military's demands sometimes grows out of a desire for greater emphasis on lend-lease; sometimes out of forethought of the effect at home of a war lasting until 1946.

Of the nearly 11,000,000 men the military want by the end of 1943, perhaps 2,500,000 will be in the Navy and Coast Guard, protecting supply lines. Of the 8,500,000 soldiers, 1,000,000 are now abroad; at most 2,000,000 more, according to one widely current estimate, can be shipped in 1943; nearly 3,000,000 will be 1943 inductees for whom, the military argue, at least one year of training and organization is required; perhaps another 1,000,000 will be needed to carry on training, supply, and other home duties.

That would leave a 1,500,000 surplus. But, the argument runs, an easing in shipping might permit transport of more troops in 1943, and perhaps 4,000,000 in 1944. These, if they need a year's training, must be serving in 1943.

To achieve this, however, will be expensive elsewhere in the war effort. Because of frictions and bottlenecks not all the energy put into augmenting the armed forces can be subtracted from the civilian economy. Even the new tanks with which selectees train consist of steel which might instead be used to build ships. Indeed, those who pessimistically point out that, in one way or another, one-third to one-half of our war production is allocated to lick the shipping problem contend that our energies should be even better focused on that job.

• **In any case,** the size of the armed forces cannot be decided now for all time. Like other manpower problems it will be with us for the duration. Six months from now we will be debating quotas for 1944. Just because this problem involves the most fundamental factors of war economics and war strategy, it will require continuing attention—from business, as from the rest of the nation.

The Editors of Business Week

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